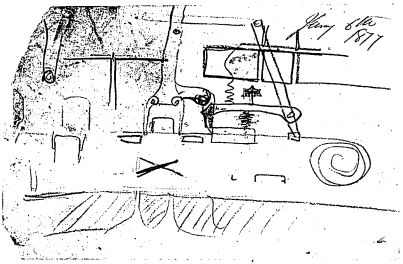
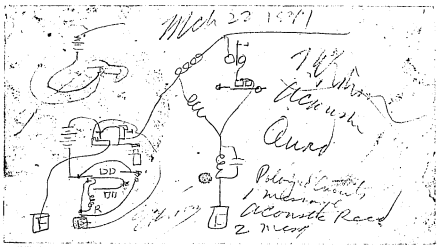
1877. Telegraph (NS-77-004)

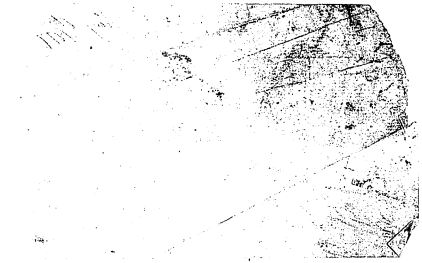
Filmed in the following order: a series of notes and drawings labeled "Sextuplex," which were probably once clipped together; other notes and drawings; tracings.





Unbound Notes and Drawings, 1874-1878

1877. Telegraph (NS-77-004)

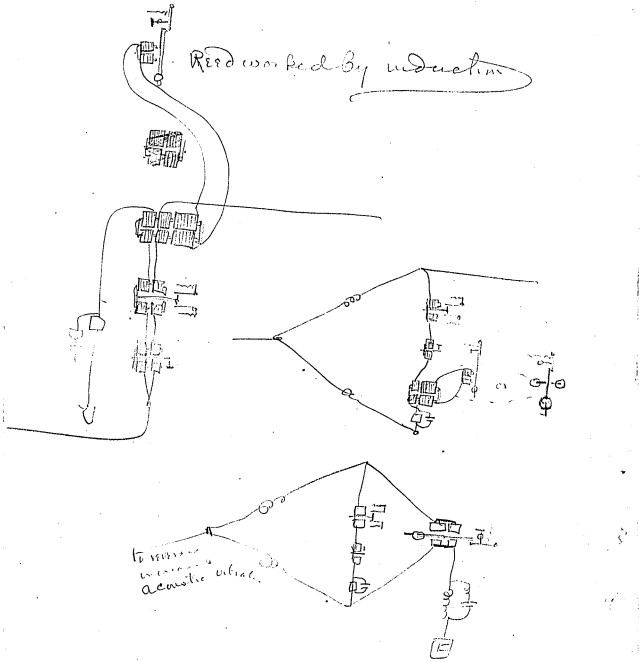


Unbound Notes and Drawings, 1874-1878

1877. Telegraph (NS-77-004)

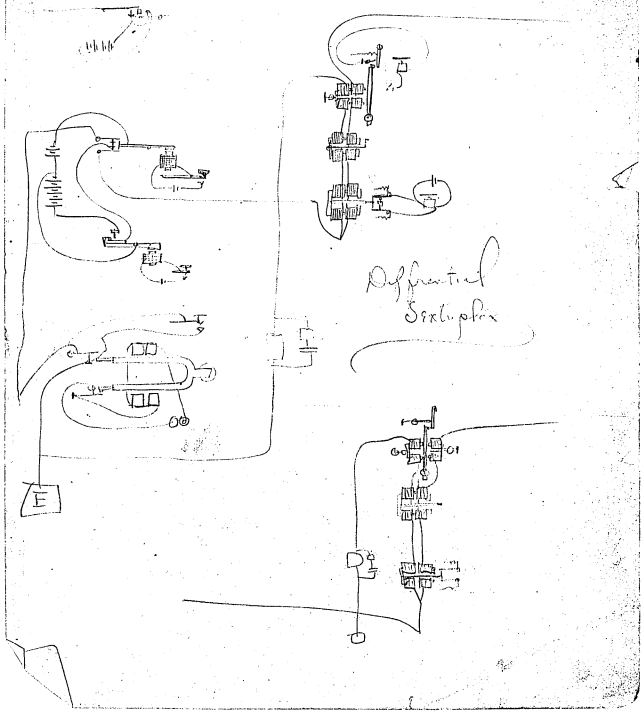
Duplex

April 4 1877
T A Edison



Sextuplex

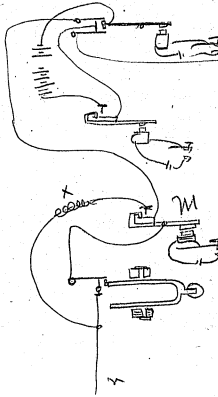
April 4 1877
J.A. Edison



Differential
Sextuplex

Duplex

April 4 1874
T A Edison



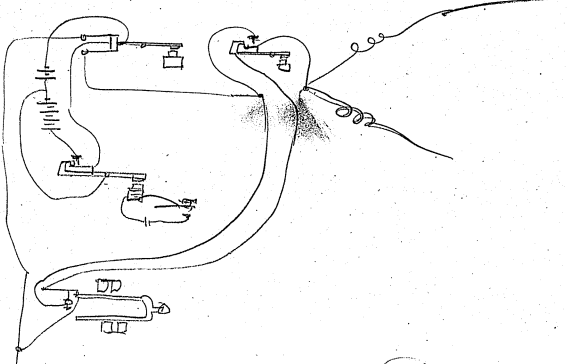
object of X is to cause each
Armature to vibrate
when the Current and when
they cease it changes it
hence when 9 stop 9 throw
in a Resonance

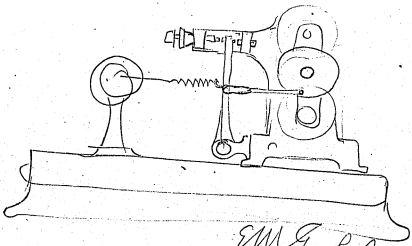
Octuplex is made by
inserting another tuning
fork at N before it is
connected to the Earth
& then is connected
exactly like the M.
shown but has a different vibration rate
and other forks may be inserted as long as
they can be arranged so as not to
interfere with the regular polarized
& main Current nuse
If multiplying the Column by 6 or 8
& it is not found necessary to use
M. it may be omitted thus

Sextuplex

April 4 1877

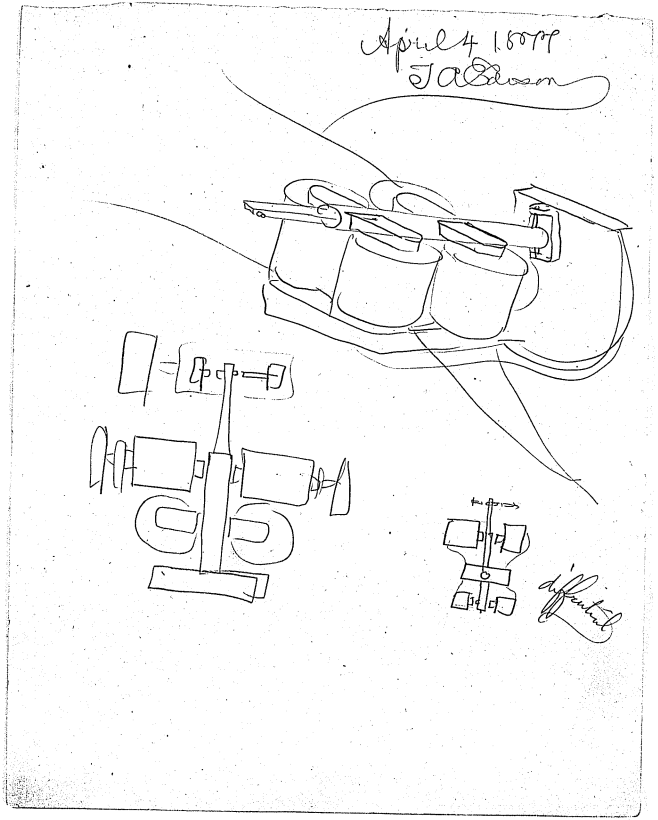
J. A. Edison

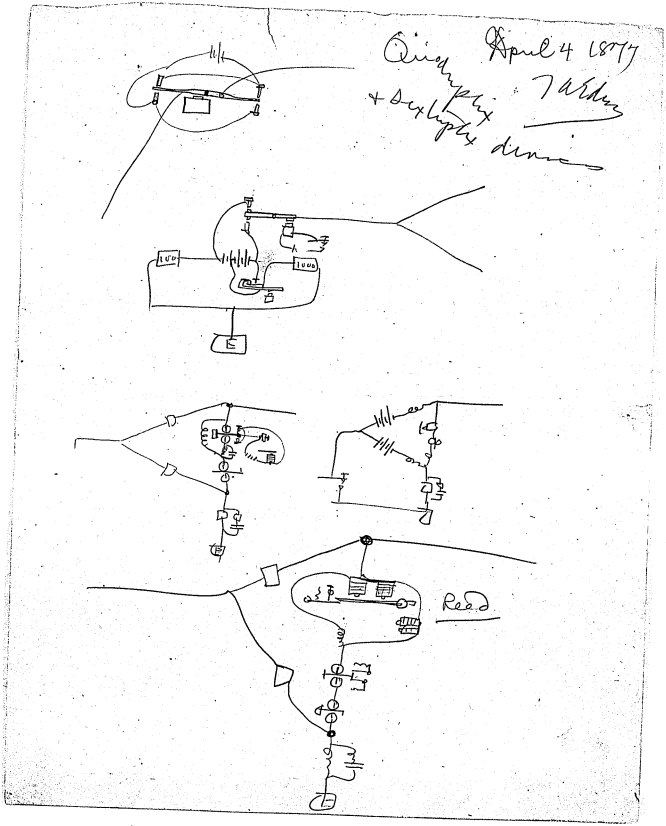




EMG Rely

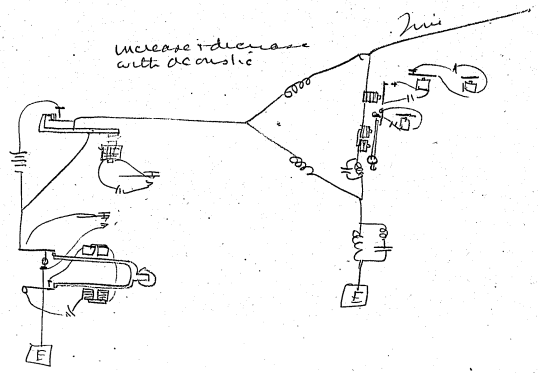
April 4 1877
T A Edison

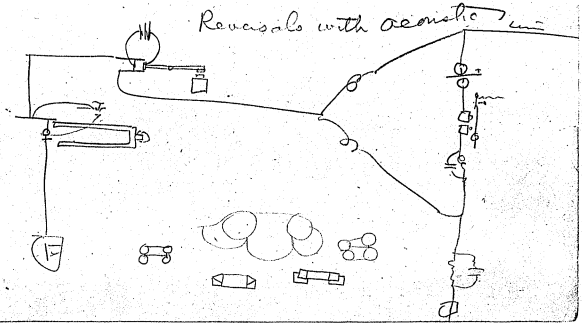


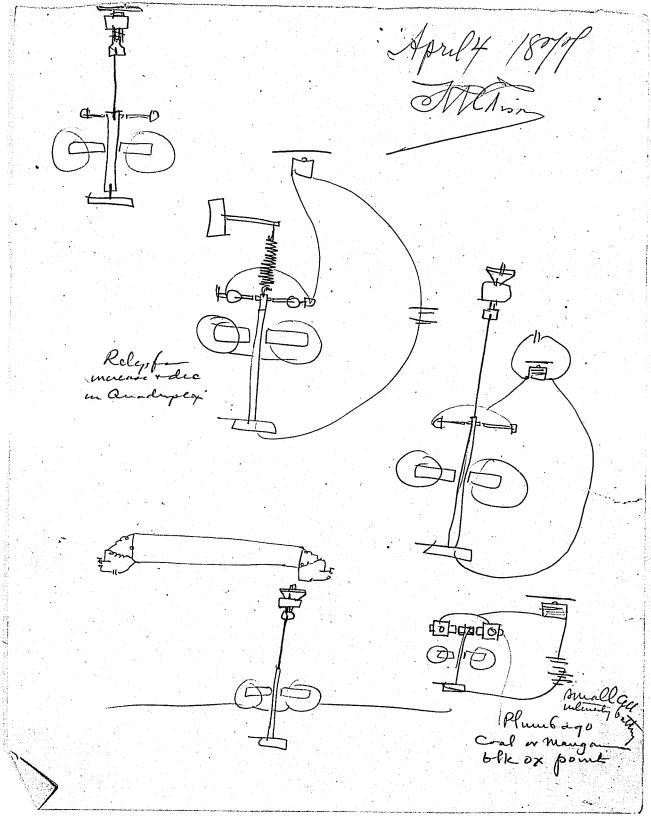

April 4 1877
T Wilson
Reed

Quadruplex

April 4 1874
Th Edison






April 4 1879
Relays from
incandescent
in Quadruplex
Small Gal
Plumbago
Coal or Manga
blk ox point

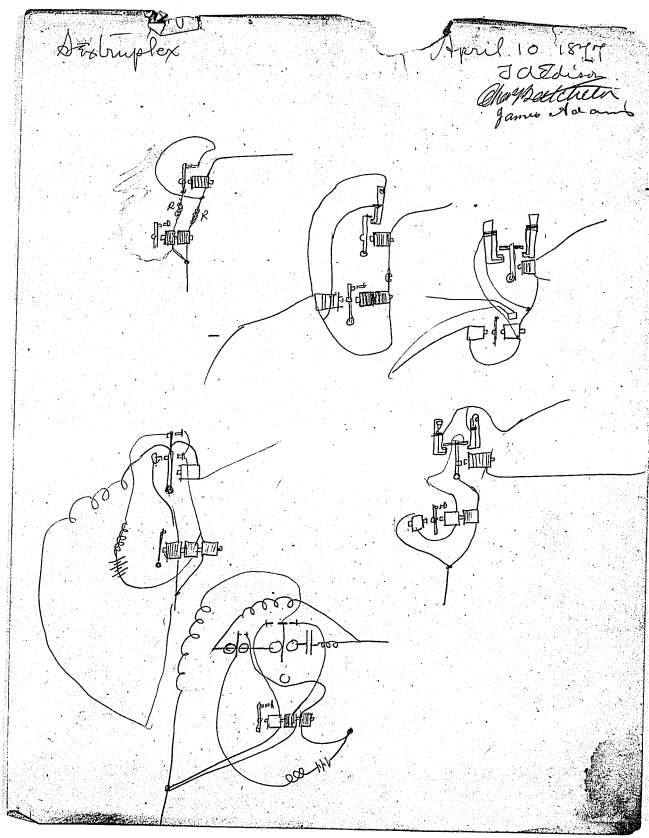
Stibruplex

April 10 1877

J. A. Edison

Chas. Batchelor

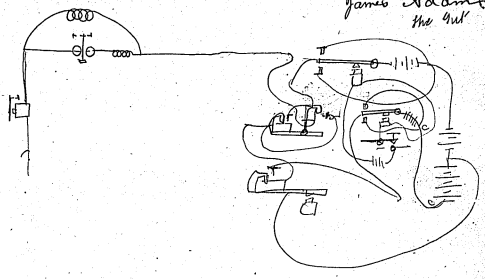
James Adams

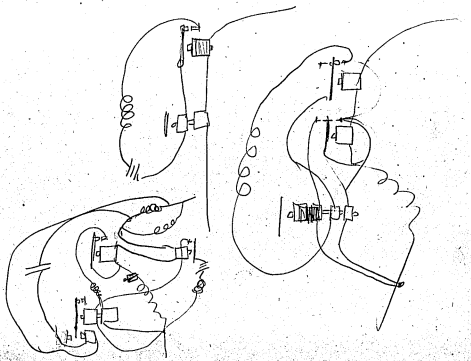


Sextuplex

April 10 1877 -
T.A. Edison.

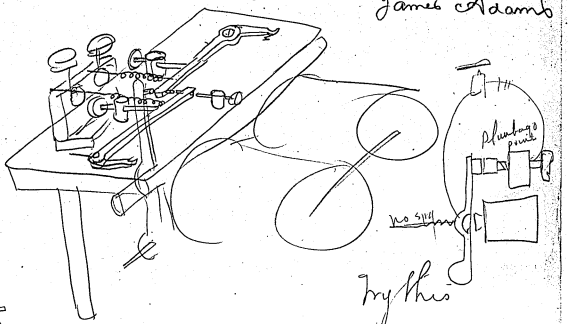
James Adams
the 4th

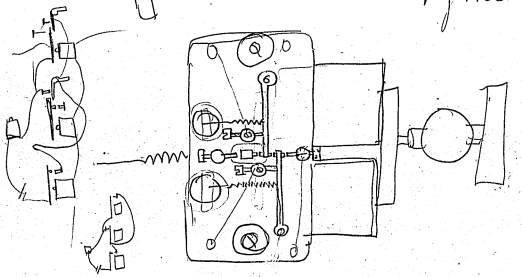




Electroplex

April 10 1877
T A Edison
Menlo Park
James Adams

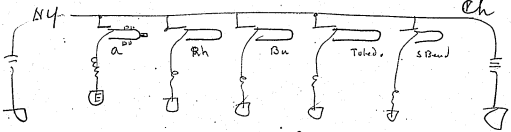




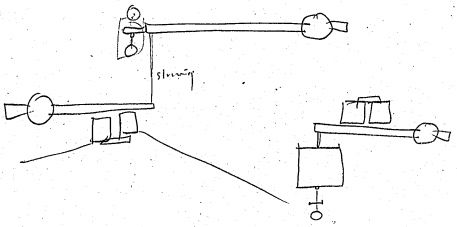
April 10 1877

T W Edw

James A Adam



discharge line by
tuning forks worked by
a Pedal



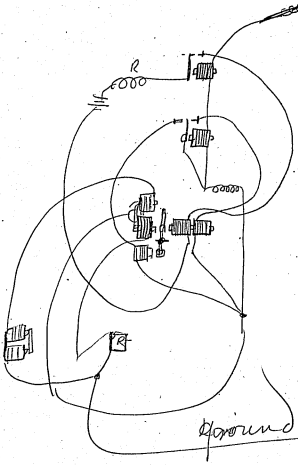
Duplex

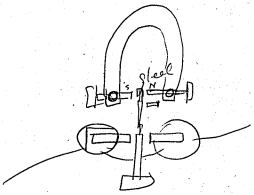
April 10 1877

Edison

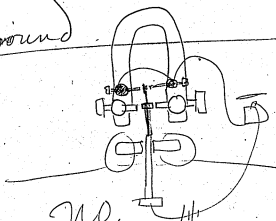
Alexander Graham Bell

James Adams





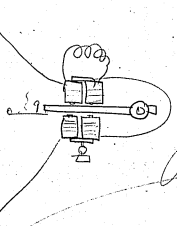
This makes it less sensitive to weak current.



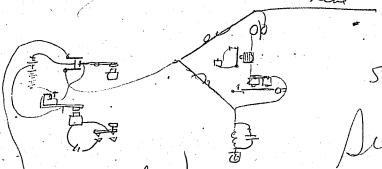
No. 11

April 10 1877
J.H. Edwards

James A Adams
the artist



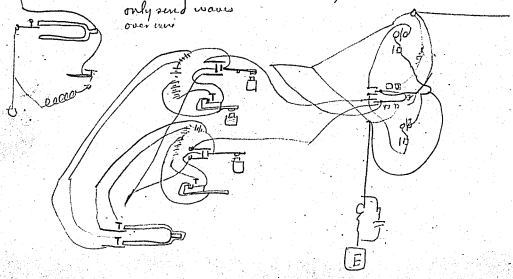
good



Same letter end

Duplex

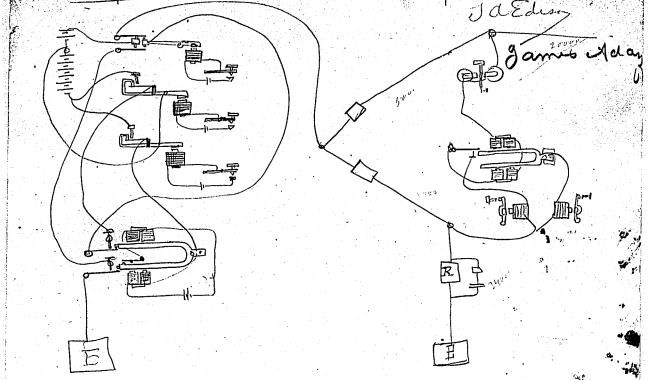
only send waves over line



Duplex

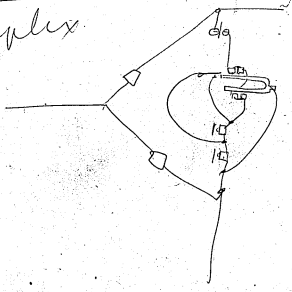
April 10 1879.

T A Edison



April 11 1877

Duplex

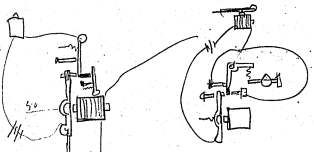


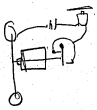
Duplex

April 10 1877.

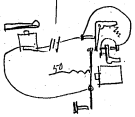
Jas. Edison

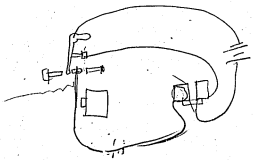
James Adams





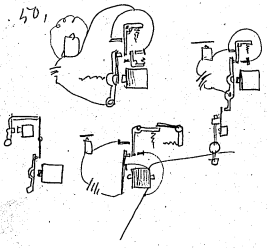
100





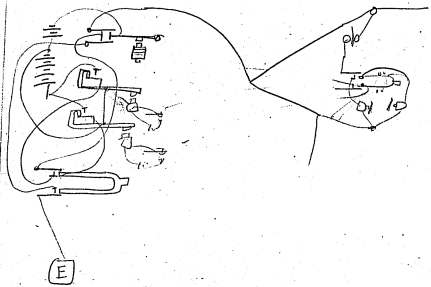
100.

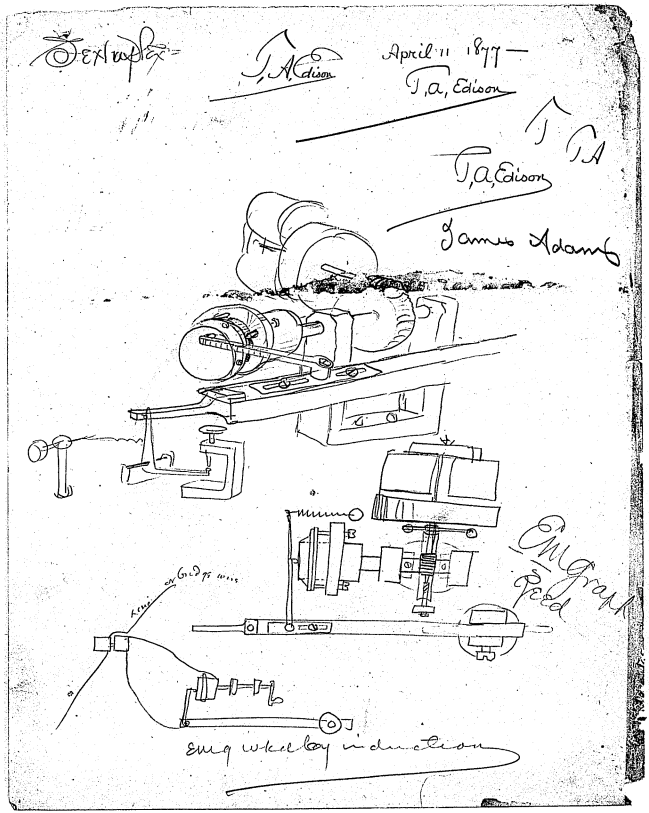
50.



April 10 1877

Duplex

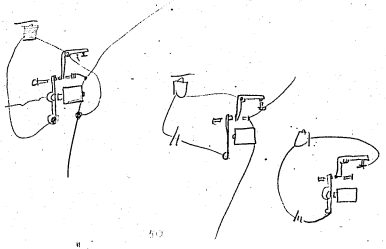



Example
T. A. Edison
April 11 1877
T. A. Edison
T. A. Edison
James Adams
Emg Graphophone
Emg wheel key indicator

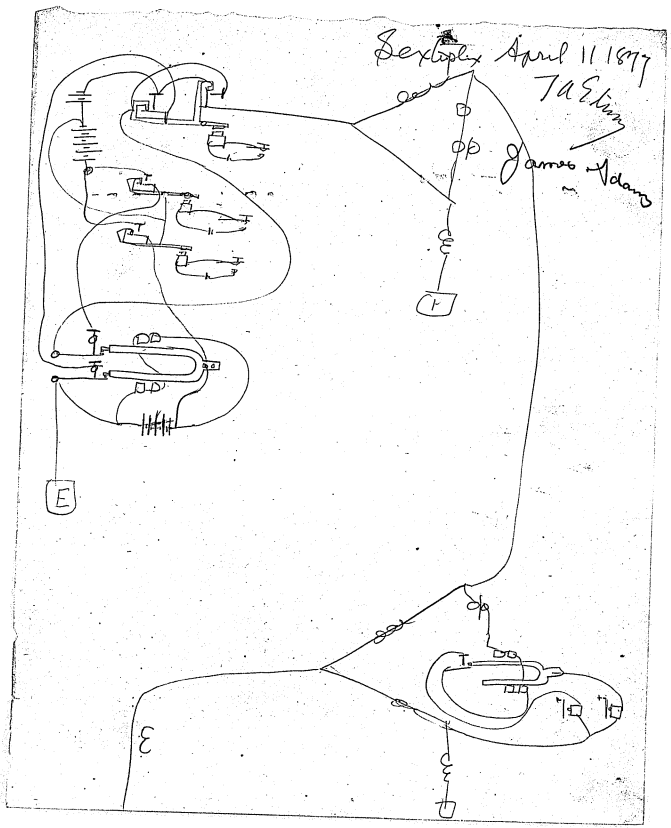
Duplex. April 11 1877.

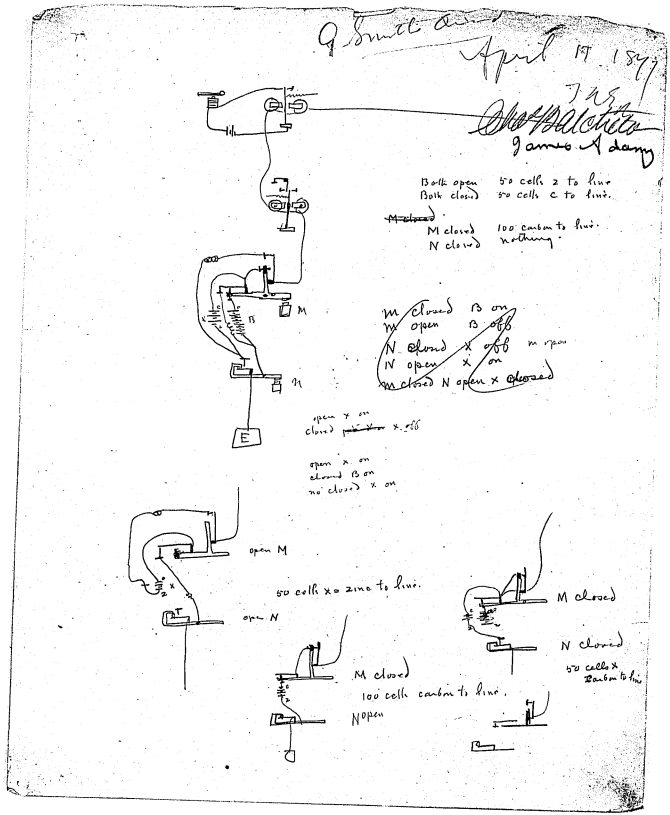
T A Edison

James Adams



Y proposes to send with 100 cells Positive reversed by Embosser on 1 Pivot, send with 100 cells Neg reversed on other line, when Both Embossers on 1 Key Kill Each other & no current reaches on a Retard line =


Sextuplex April 11 1877
T A Edison
James Adams
E


April 19. 1849
James Adams
Both open 50 cells z to line
Both closed 50 cells C to line.
M closed 100 cells carbon to line.
N closed nothing.
M closed B on
M open B off
N closed X off
N open X on
M closed N open X closed
open X on
closed B on
no closed X on
open M
50 cells x o zinc to line.
open N
M closed
N closed
50 cells x Carbon to line
M closed
100 cells carbon to line.
N open
E

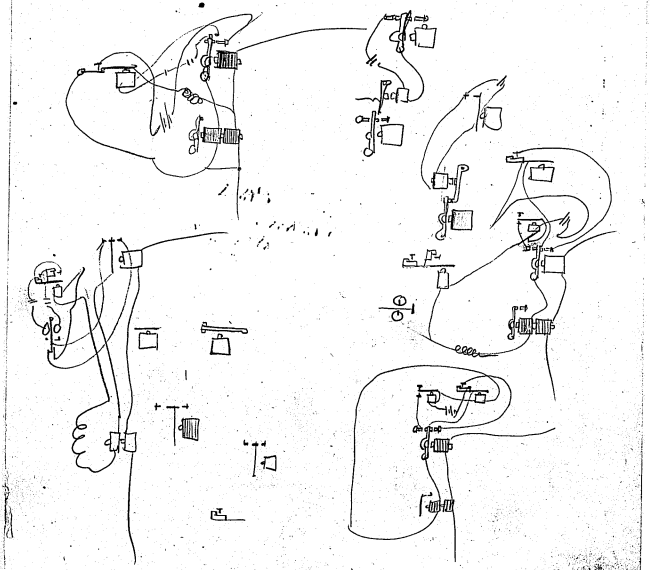
Sunlight

April 12 1877

T.A. Edison

I think rawhide or a small platina diaphram would be best thing for Em. Graph - with Accoustic

James Adams

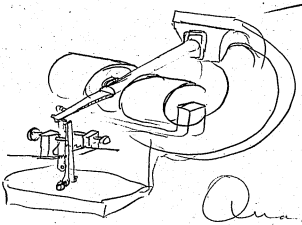


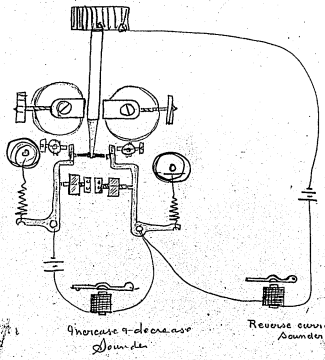
April 12 1877

T. A. Edison

James A. Adams

Chas. Batchelor





18
54

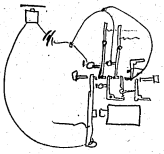
105.
18
20
50
213.

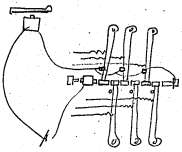
Detroit
Detroit
Detroit
Detroit
Detroit

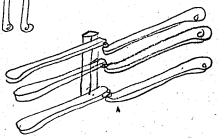
April 12 1877
Jardine

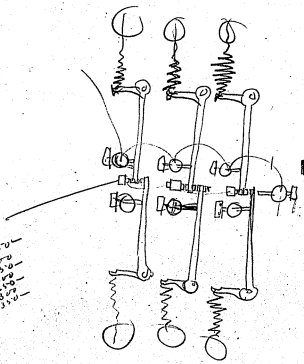
Increase of dec Quad of Sextuplex

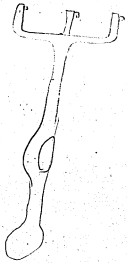
James Adams







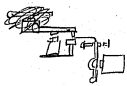


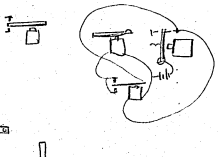


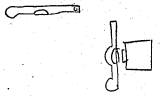
Duplex

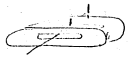
April 12. 1874.
T. A. Edison

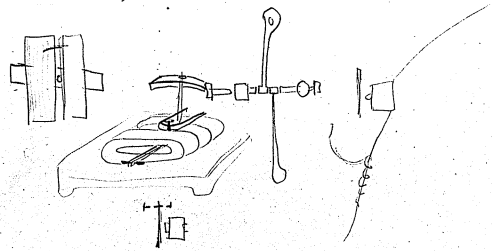
James Adams
Chas. Batchelor

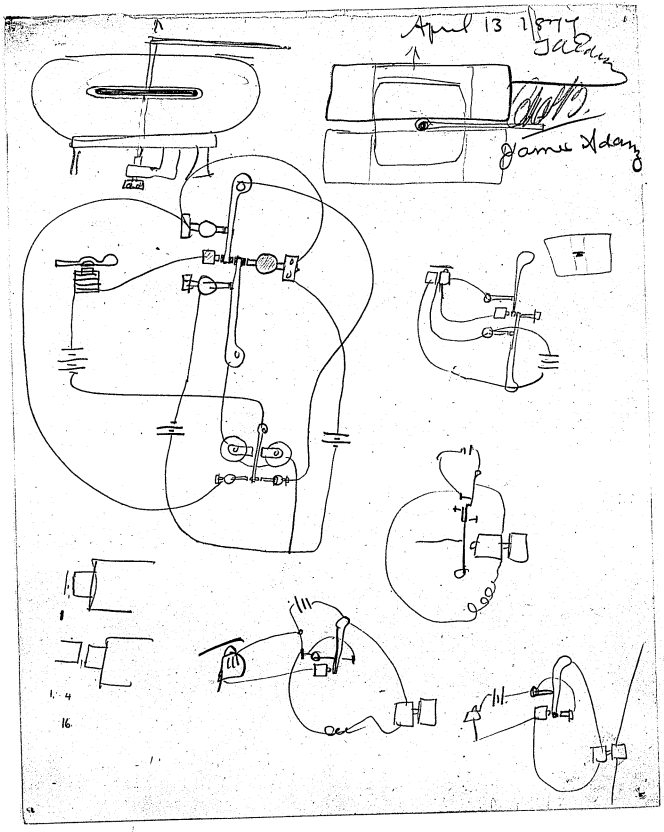








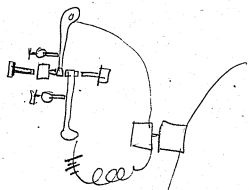



April 13 1877
James Adams

D

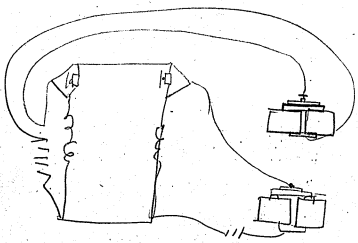
April 13 1877
J. A. Edison

James Adams
Chas Batchelor

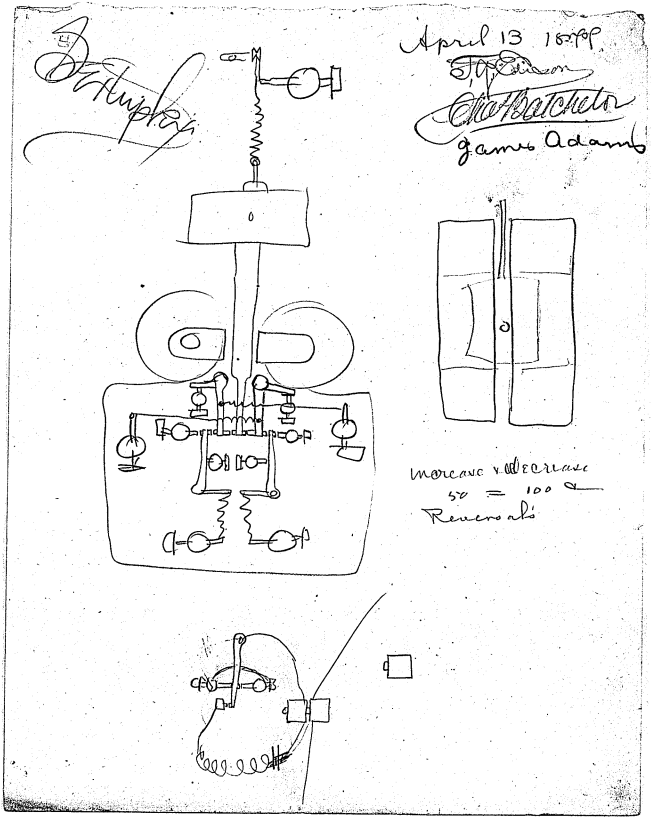


Sir Charles

April 16 1877
J. A. Edison



Boston
Boston
Boston


April 13 1897
Witnesses
James Adams
Increase of Decrease
50 = 100
Reverse

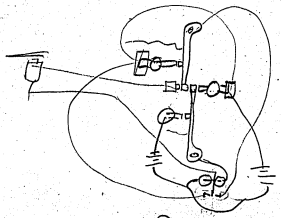
Sextuplex

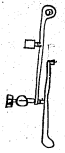
April 13 1877

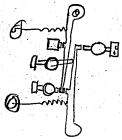
T A Edison

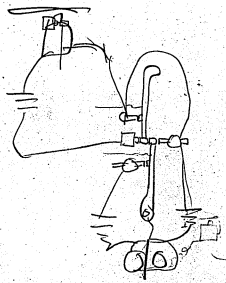
Charles Batchelor

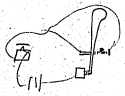
James Adams







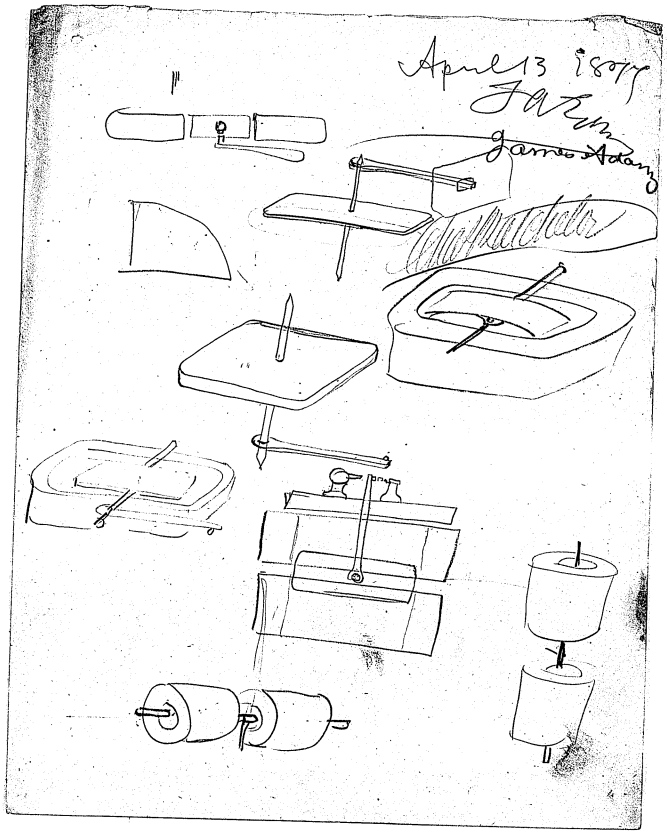




50. 50.

100 125

50.

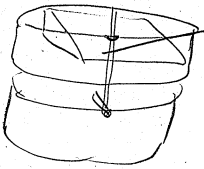

April 13 1877
James Adams

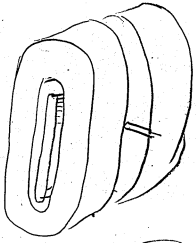
April 13 1899

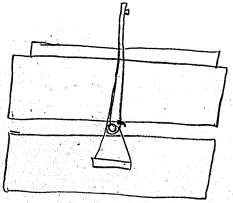
Edison

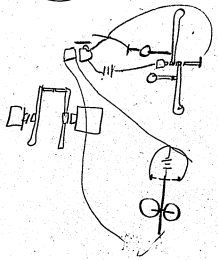
Chas Batchelor

James Adams









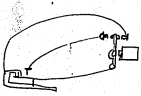
Description

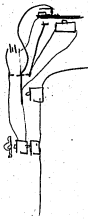
April 13 1877.

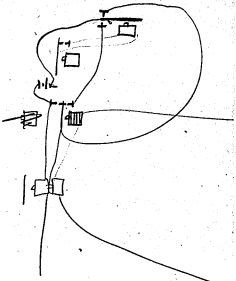
T A Edison

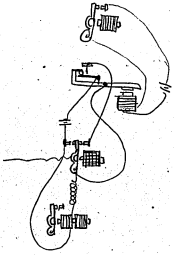
James Adams

Chas Batchelor









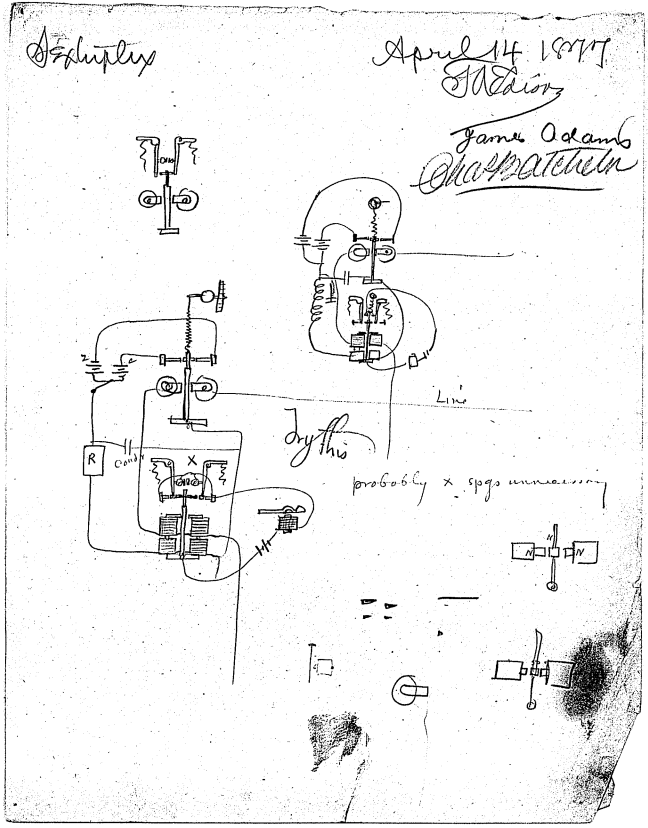
Duplex

April 14 1877

Edison

James Adams

Quadruplex



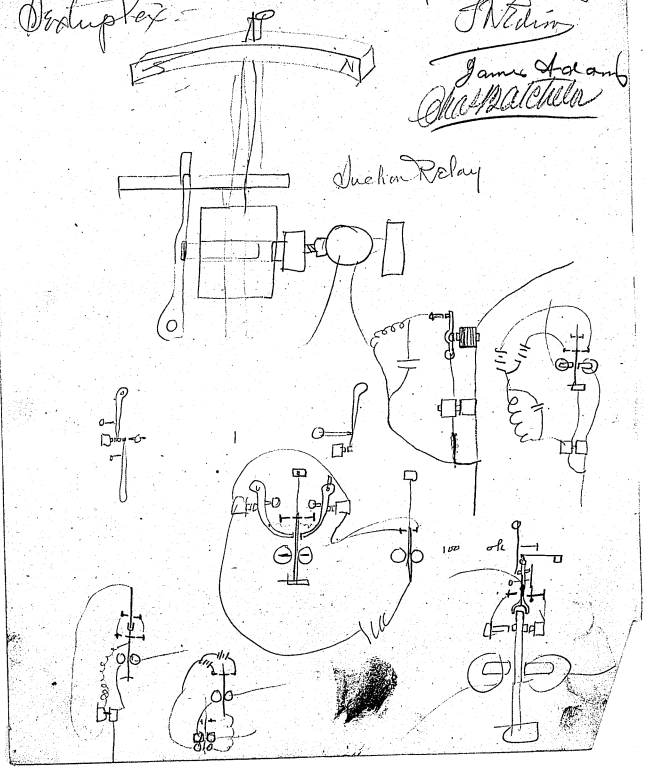
Sextuplex.

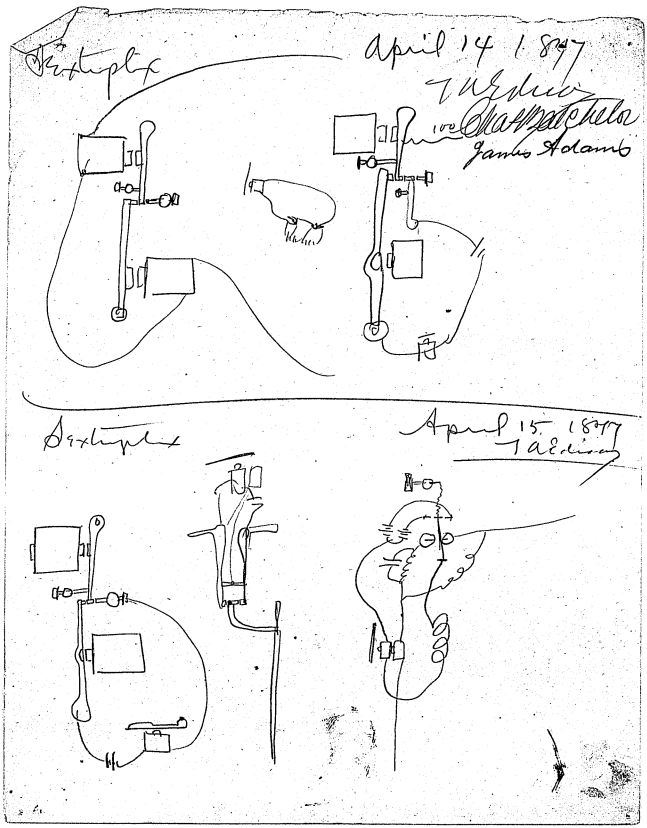
April 14 1877.

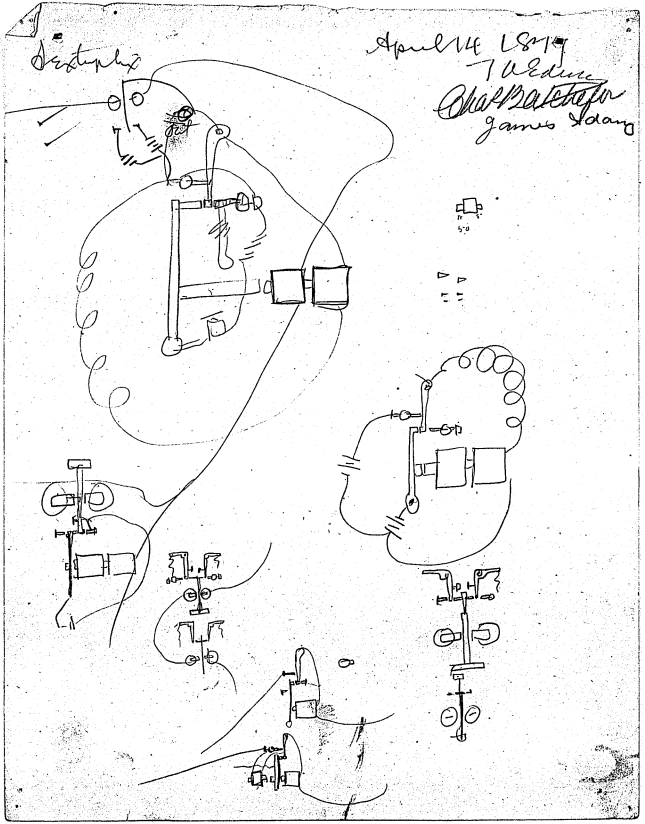
J. N. Edison

James Adams

Chas. Batchelor




Dentuplex
April 14 1847
Dentuplex
April 15 1847

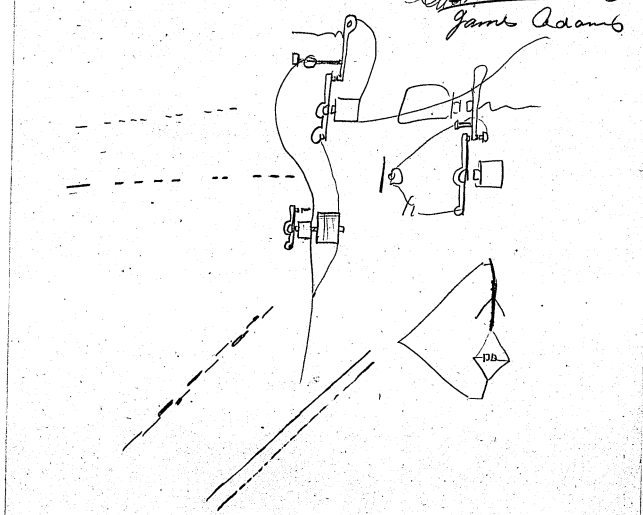

Destruplex
April 14 1879
To Edison
Chas Batchelor
James Adams

Dextroplex

April 15 1879.

T A Edison

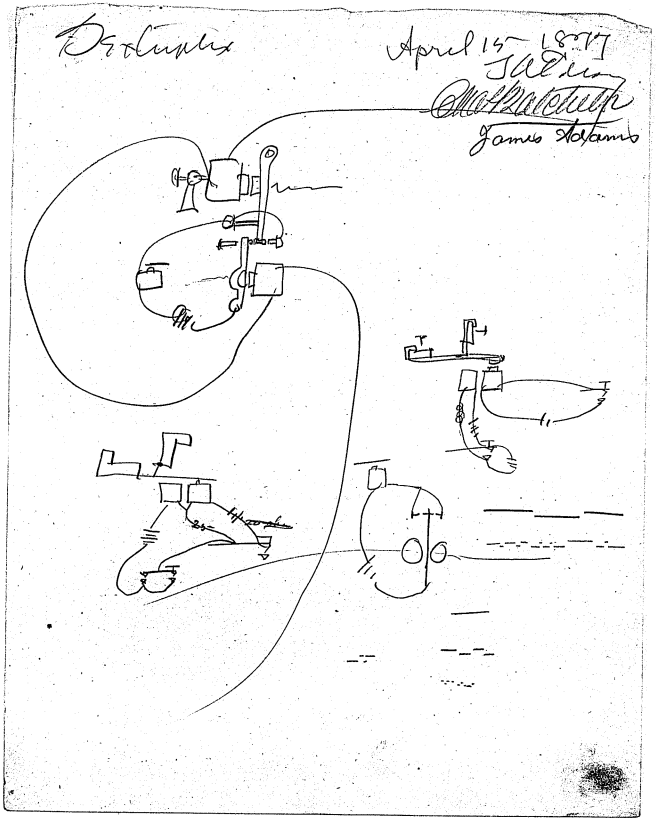
James Adams

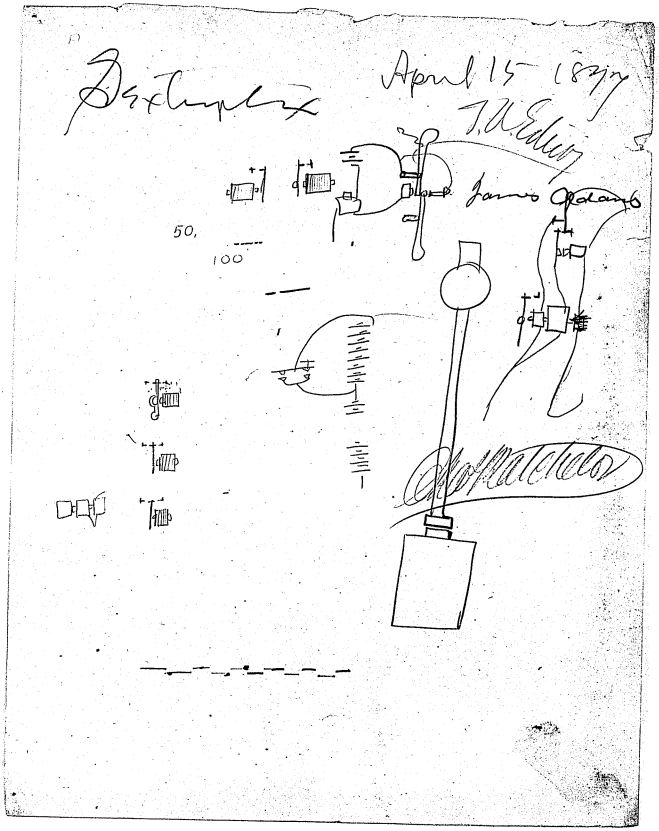


Drawings

April 15 1877

James Adams




April 15 1897
T. W. Edison
James Ogden
50,
100

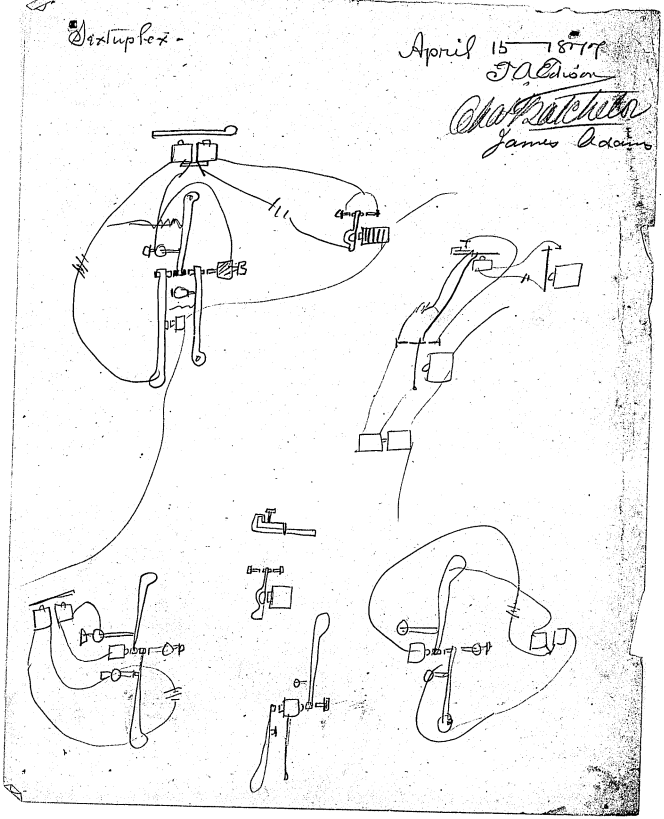
Dextroplex -

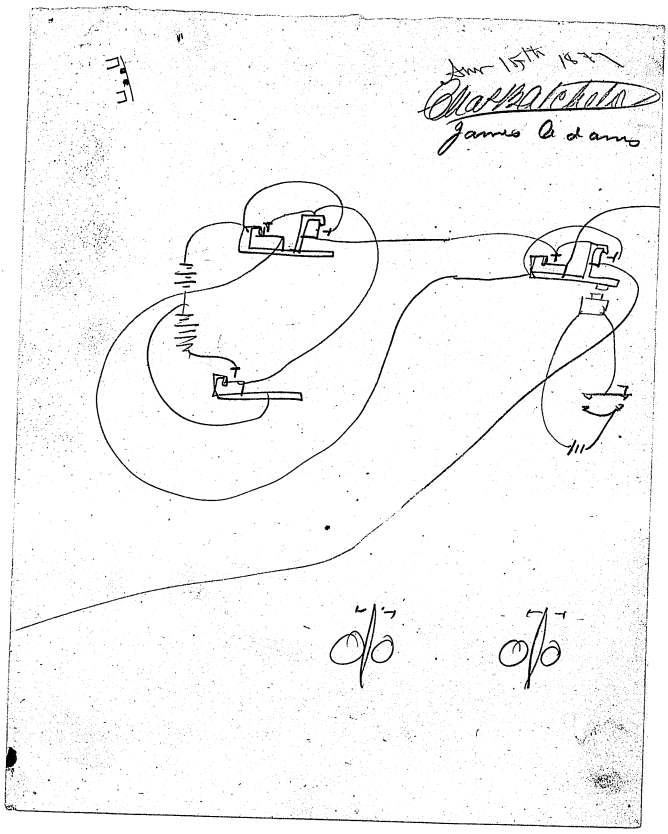
April 15 1877

T A Edison

Chas. Batchelor

James Adams




June 15th 1897
Marshall Adams
James A. Adams

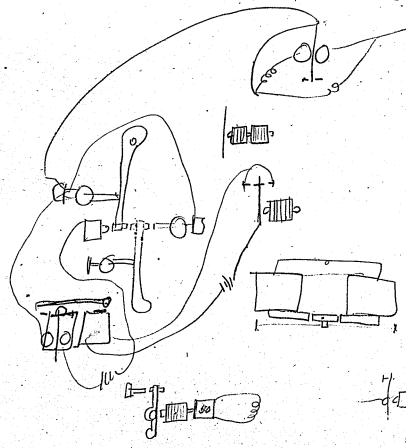
Dextrophyt

April 15 1897

J. A. Edison

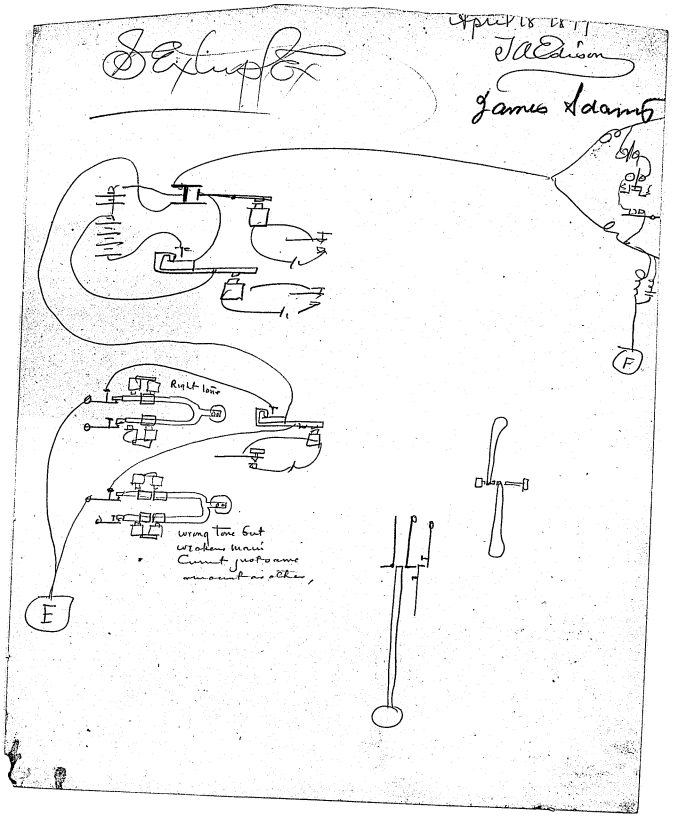
James Adams

Charles Latchaw



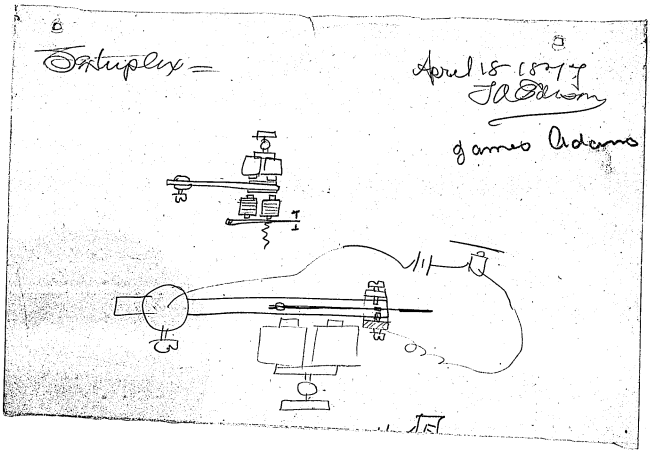
50 X 5-0 O P

100 X 5-0, 5-0 N


Right tone
wrong tone but
works well
Current just to name
one out of a dozen,
E
F

Sextuplex —

April 15 1917
J. A. Olson
James Adams



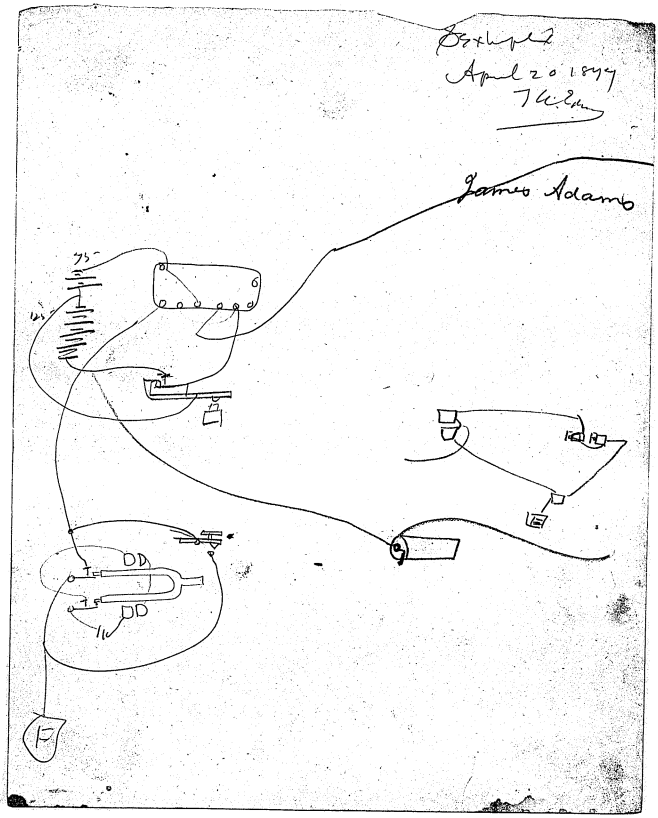


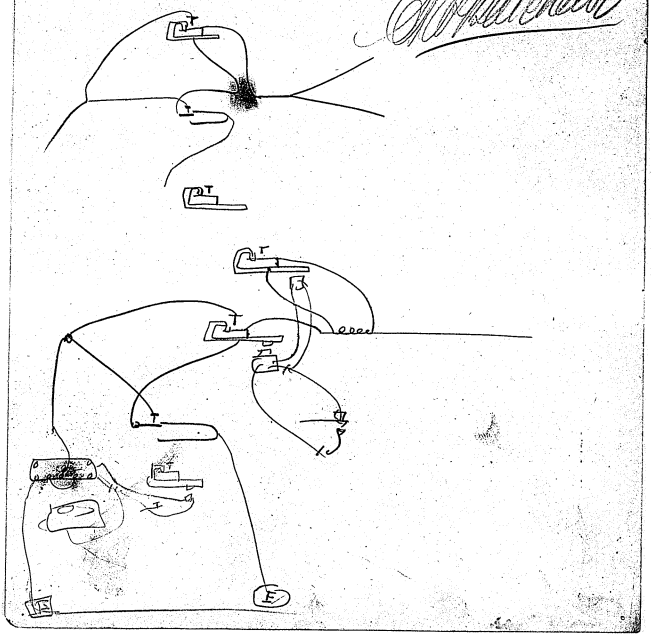
Exhibit 2
April 20 1894
James Adams
75
DD
DD

Duplex ac

April 22 1879

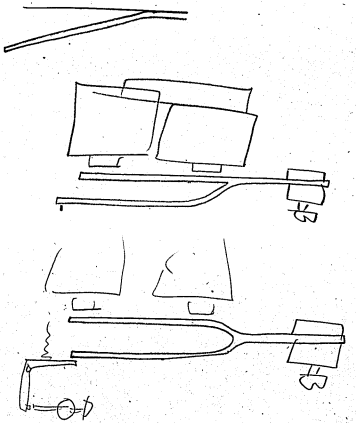
7 a.m.

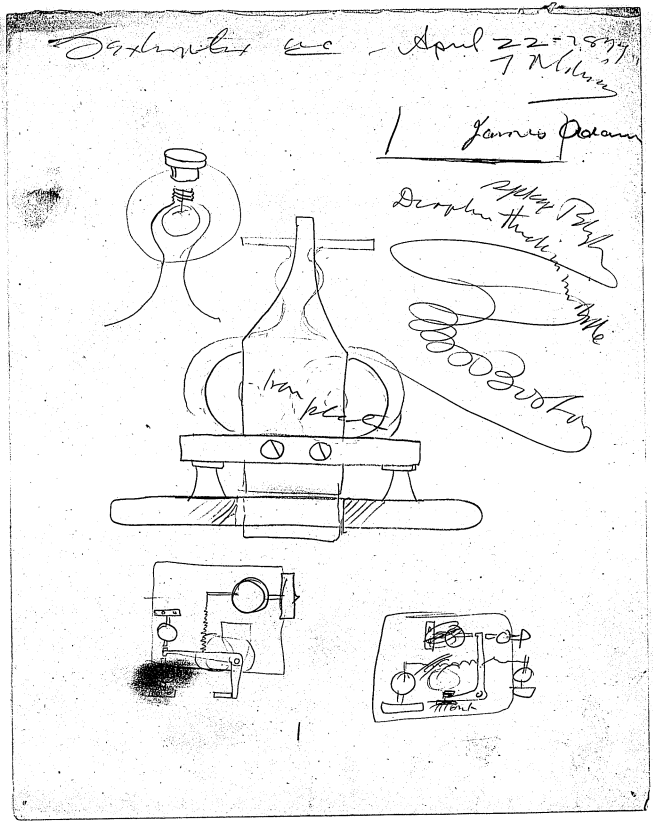
James Adams


T
T
T

April 22 1873

James adams



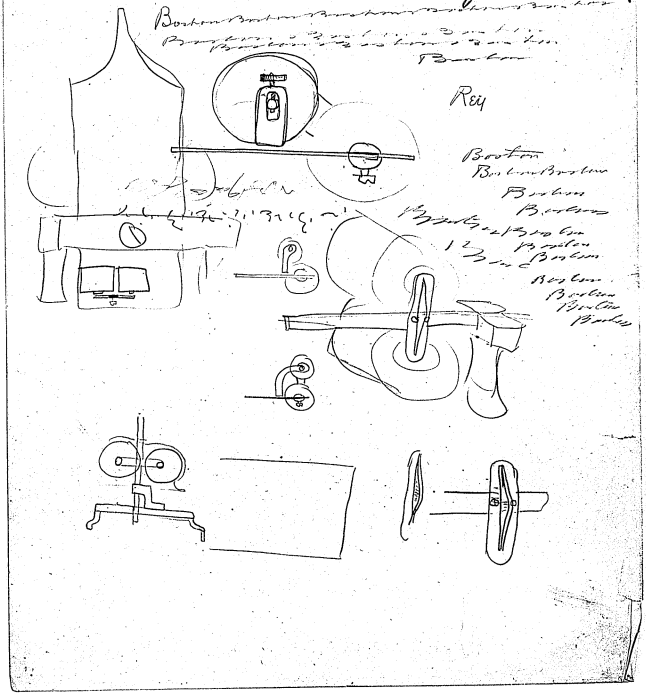


Southampton

April 22 1877

J A Edison

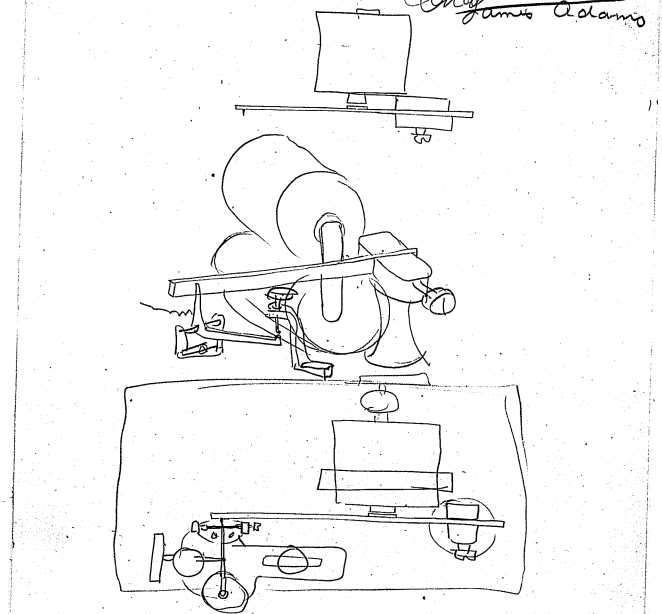
James Adams



Baxlumbus

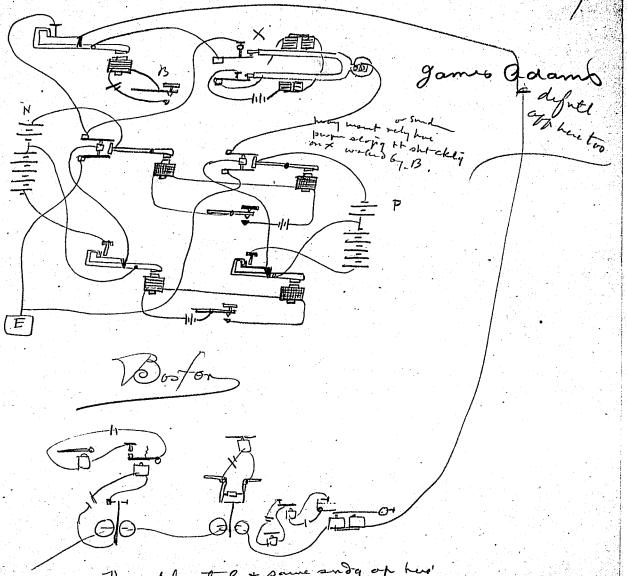
April 22 1877

Witness
Mathatcher
James Adams



Duplex

April 23 1874
TA Edison



James Adams
to difficult
apparatus too

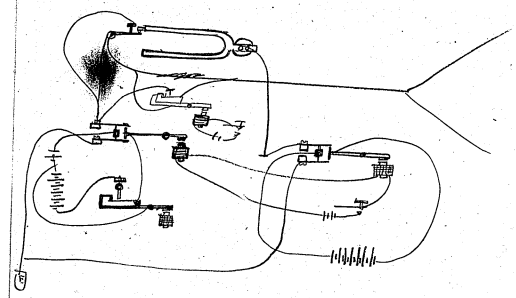
long mount relay here
keeps closing it short-circuits
coil & works by B.

These differential + same endg up here

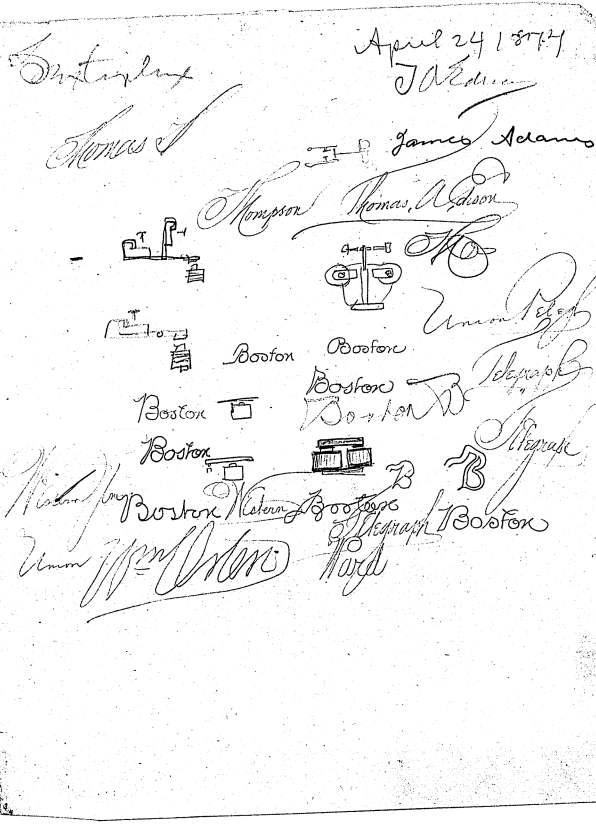
Duplex -

April 23 1877
J. A. Edison

James Adams



April 24 1874


Thomas A
James Adams
Thompson
Thomas A. Edison
Boston
Boston
Boston

Duplex

April 24. 1877

T. A. Edison

James Adams

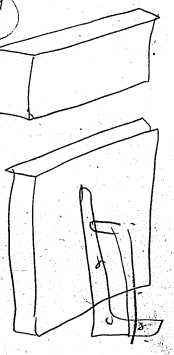
Morning

Rey Reyn

Thas A. Edison

Thas A. Edison

Thas A. Edison

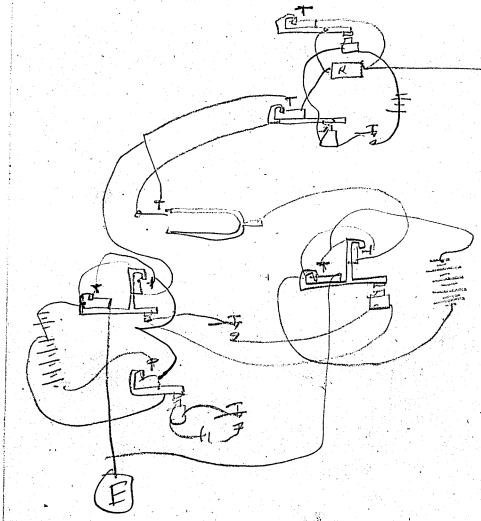


Sextuplex

April 24 1879

T A Edison

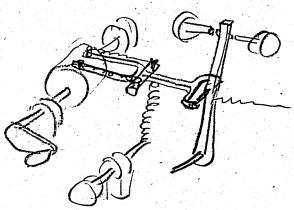
James Adams

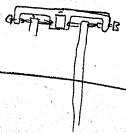


Septuplex
Emig app

April 27 1877
J A Edison

James Adams





Talking Tel

1 Lamp black
1 Bone Black
Bituminous Coal
Anthracite Coal
1 Black oxide Manganese
½ Black oxide Manganese & Plumbago -
Iodide Copper - small disk
Peroxide of Iron =
Sesquioxide of Iron

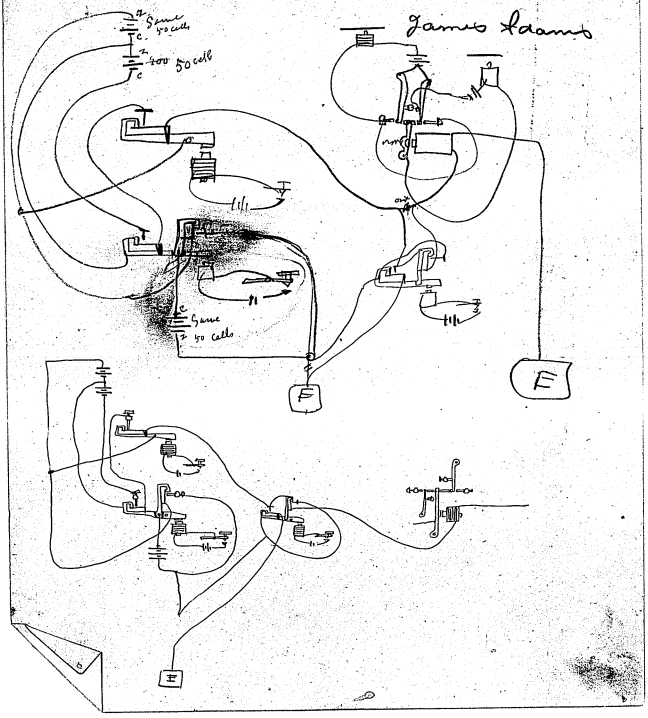
Protoxide Nickel,
Bisulphuret of "
Chromate Copper
Paris green

Duplex

April 24 1877.

J A Adams

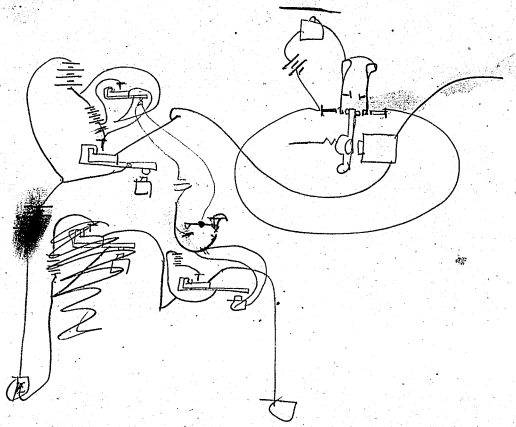
James Adams



Duplex

April 27, 1877 =

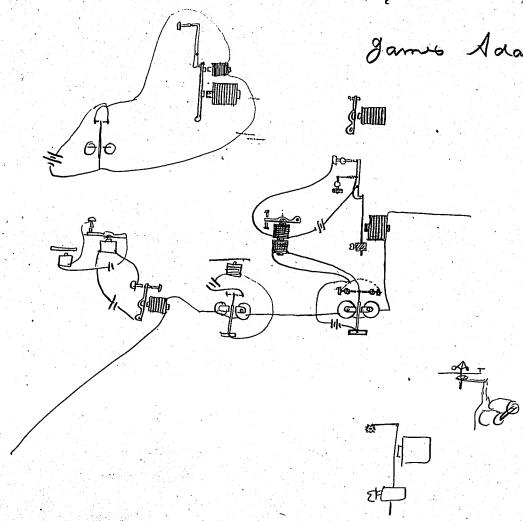
James Adams



Alex Graham Bell

April 28 1877
Edison

James Adams

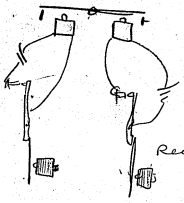


Sextuplex

April 28 1877

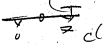
J. A. Adams

James Adams

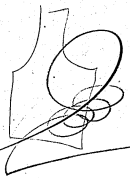


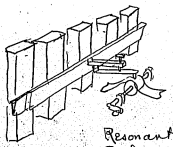
156 Vib

178, Vibs



Open 156 or thereabouts





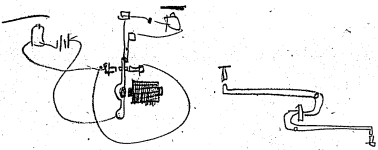
11 W Boston

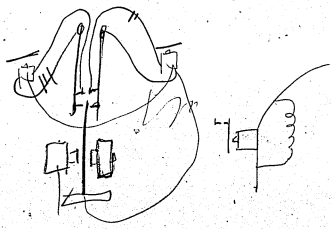
Resonant Boxes with diff Columns air + Eng

April 25 1899

T. A. Edison

James Adams

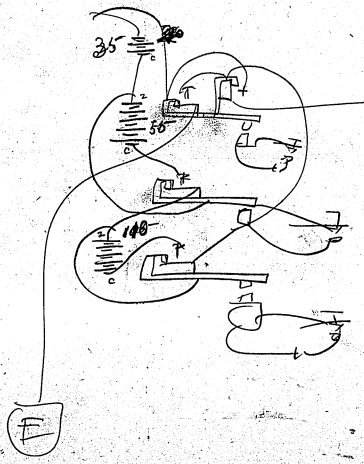




Duplex

April 29 (1899)

James Adams

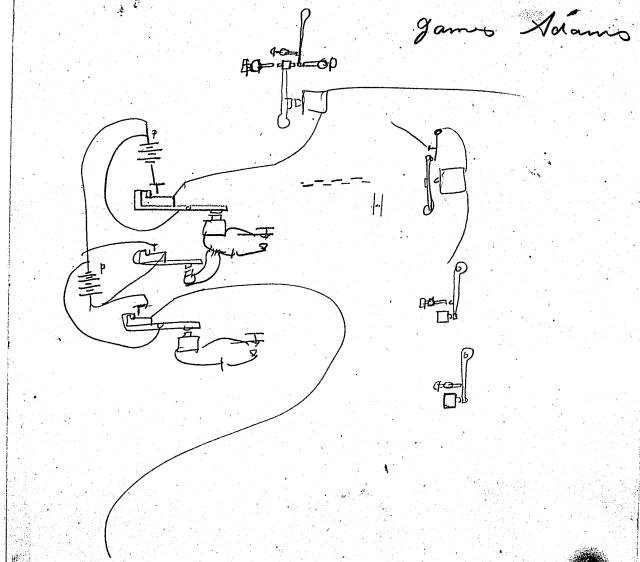


Duplex

April 29 1875

T.A. Edison

James Adams



Duplex

Jan 3rd

James Adams

Plans of working 3 messages in the same direction for Duplex working.

1 Reversals
2 Increase +
3 Increase +

Polarized relay 50 perm
Common " 75- mic
Common " 150 "

Reversals
Increase +
Acoustic -

Polarized relay 75 perm
Com " 100 mic
Acoustic " Overall Total

Reversals
Very small reversals of the 1st long reversals
Increase +

Polarized relay 50 perm
" or acoustic same
Com Relay

1 Increase + d
2 Increase + d
3 Acoustic

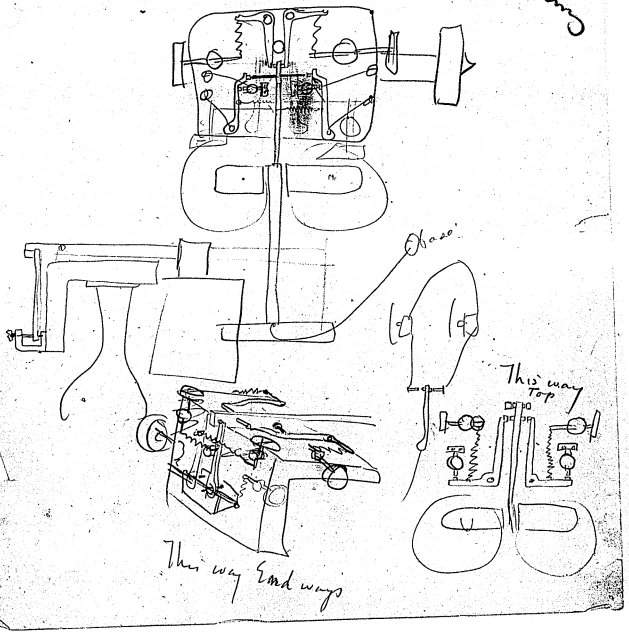
4 relay { Com relay / 75-
Com relay / 50
Acoustic, 50 perm

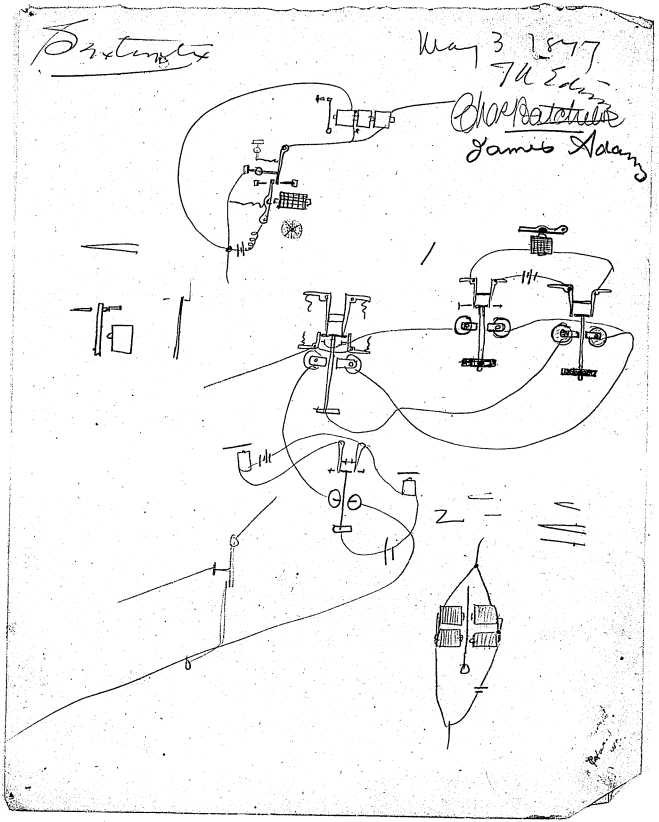
3 increases 50 - 100 - 200 -

Specification

May 3 1877

Jas Adams



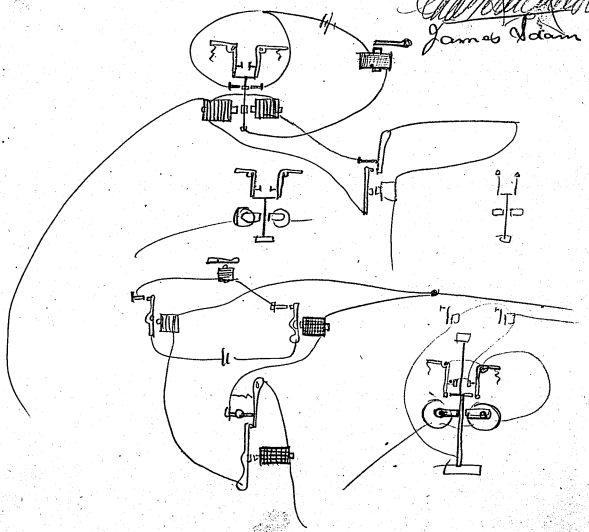

May 3 1877
Electric Motor
James Adams

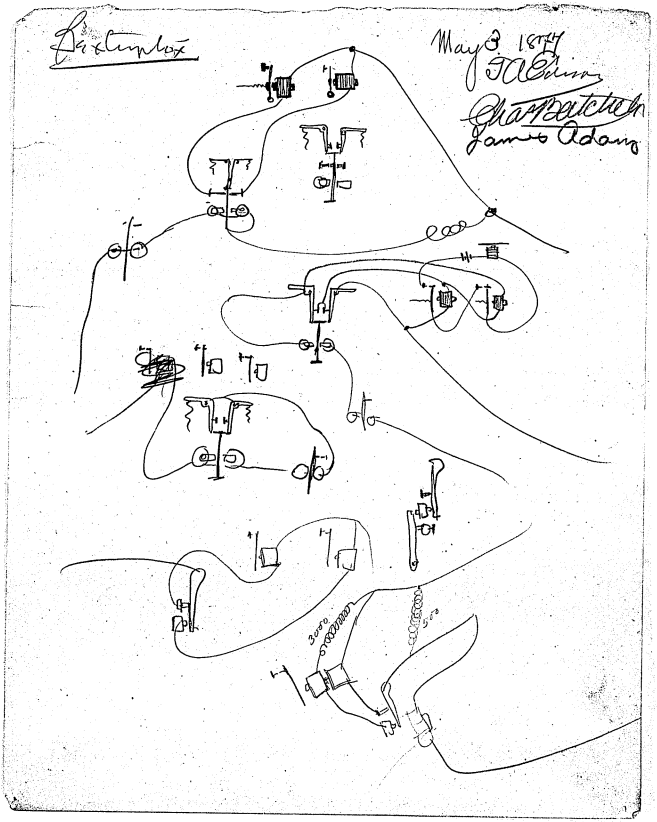
Sextuplex

May 3rd 1877

Thos A Edison

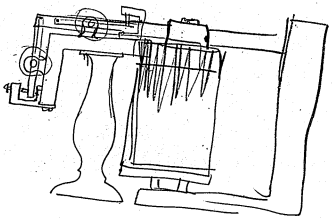
James Adam




May 3 1874
James Adams

Satisfactory

May 3 1847.
J. A. Adams
Chas. Batchelder
James Adams



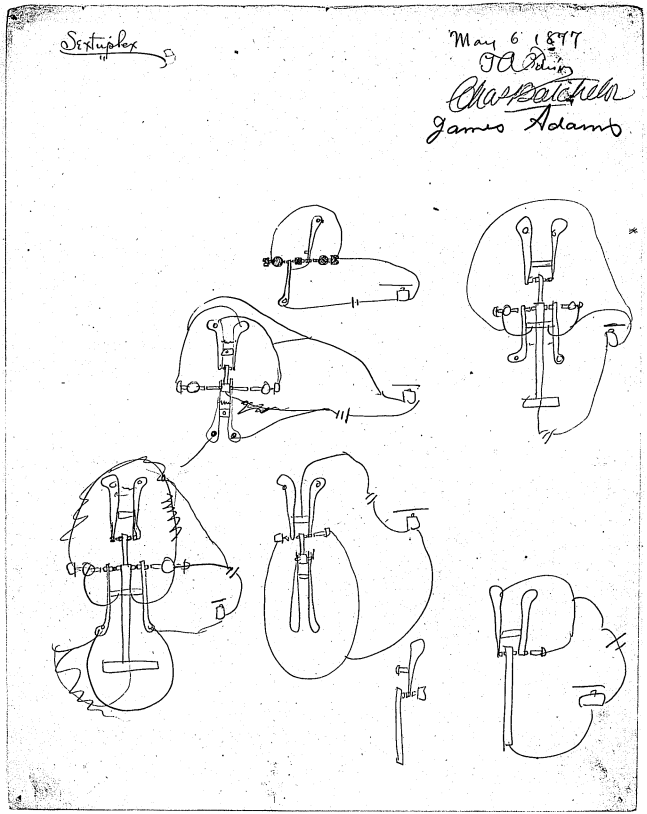
Sextuplex

May 6 1877

T. A. Adams

Chas Batchelder

James Adams

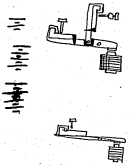


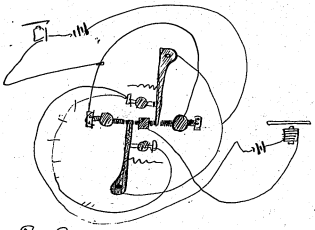
May 6 1847

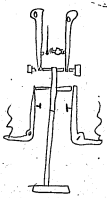
J. A. Quinn

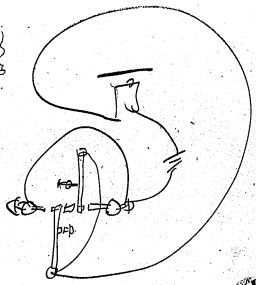
Chas. Batchelor

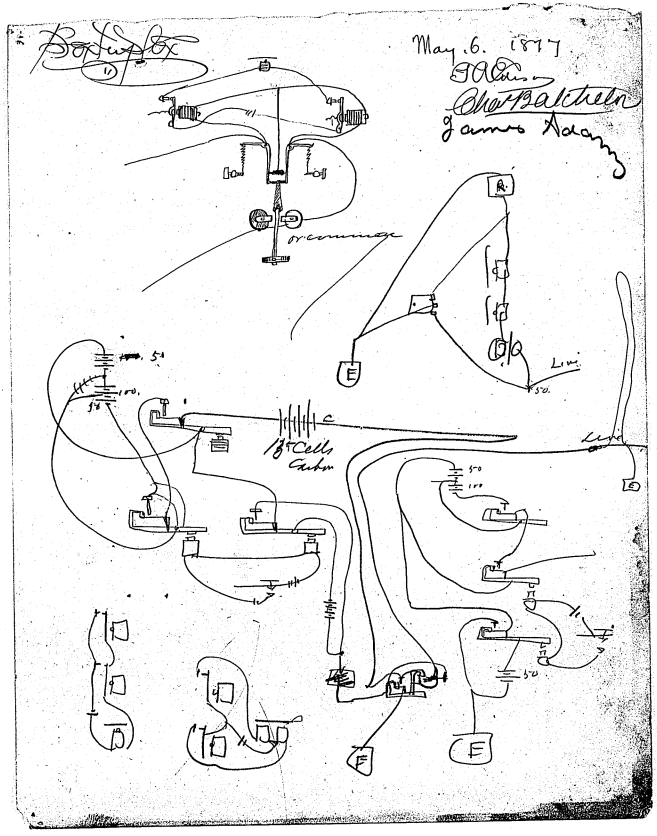
James Adams







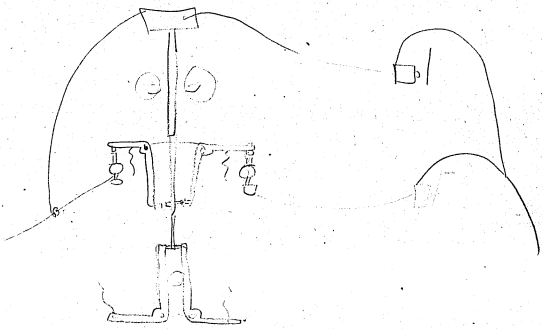



Box Key
May. 6. 1877
Chas Batchelder
James Adams
Lin
125 Cells
Carbon
50
100
150

Baptismal Font

May 6 1877

Witness
James Adams



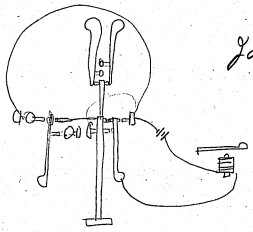
Sextuplex

May 6 1877

T A Edison

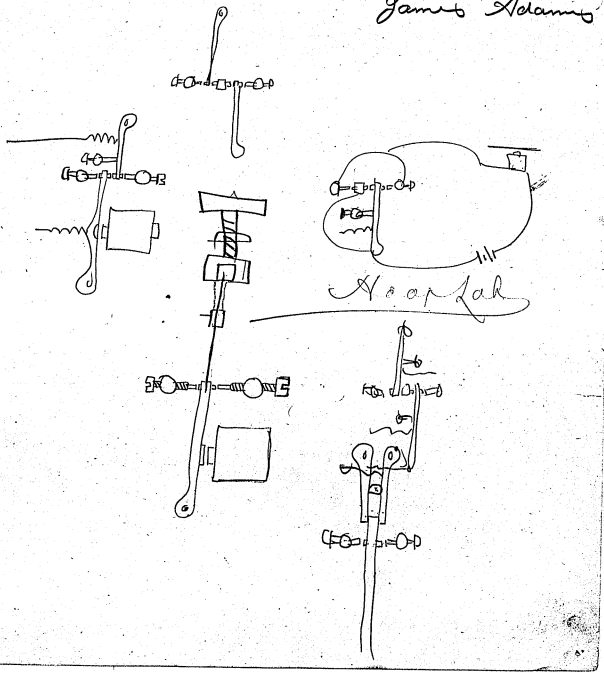
Ethelbert Watkins

James Adams



Duplex

May 8. 1877
J.A. Edison
Chas. Batchelor
James Adams

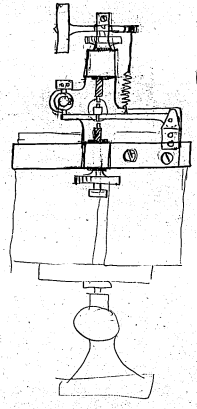


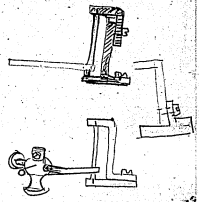
Sectional

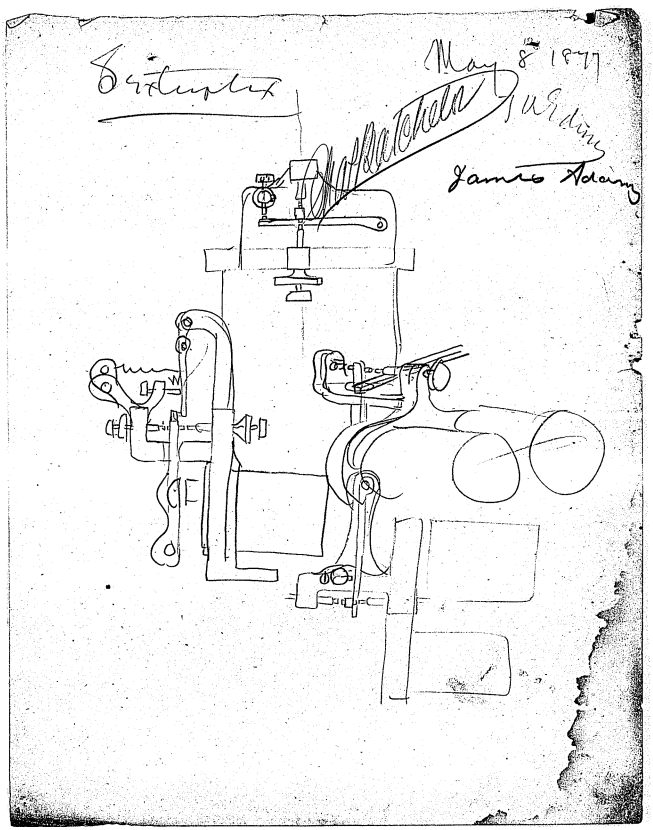
May 8th 1877

James Adams

Chappaqua

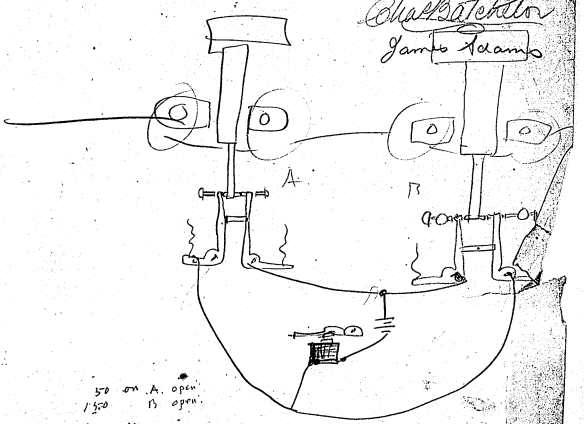





May 8th 1877
James Adams

Sketch.

May 8th 1877.
J. A. Adams
Charles Batchelor
James Adams

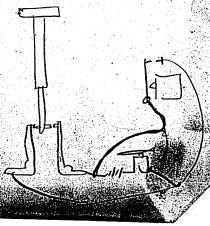


50 on A open
150 B open
50 off

50 off A open
150 B open

50 on A open
150 B Closed

0 on A Closed
150 on B open



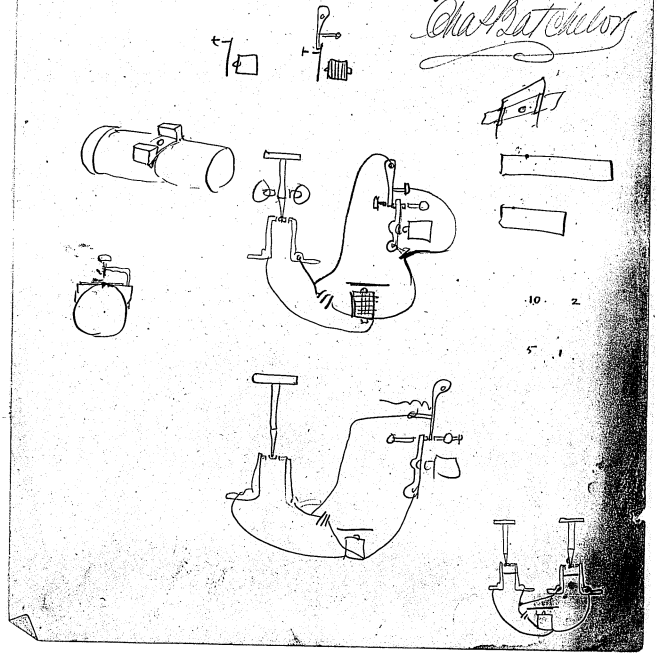
Santuplex =

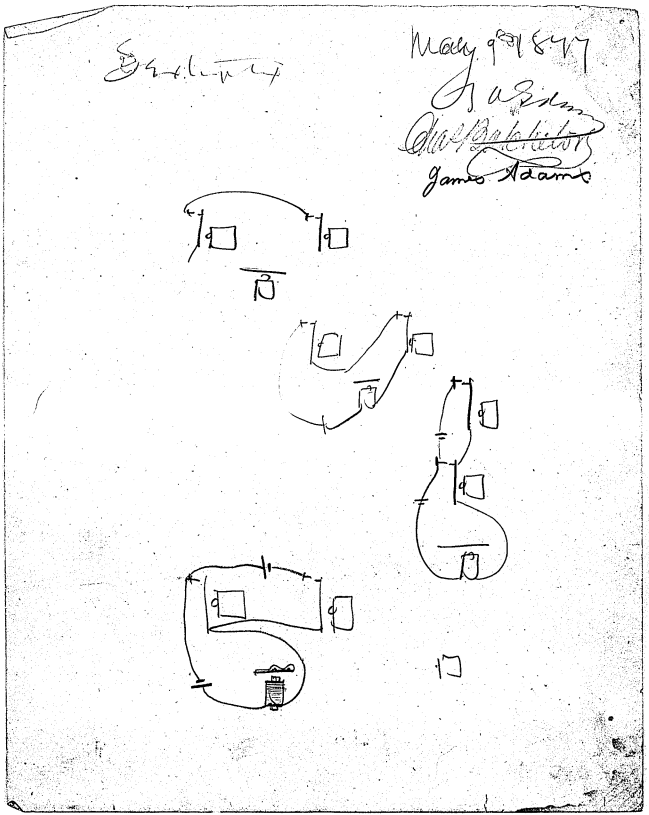
May 9 1874

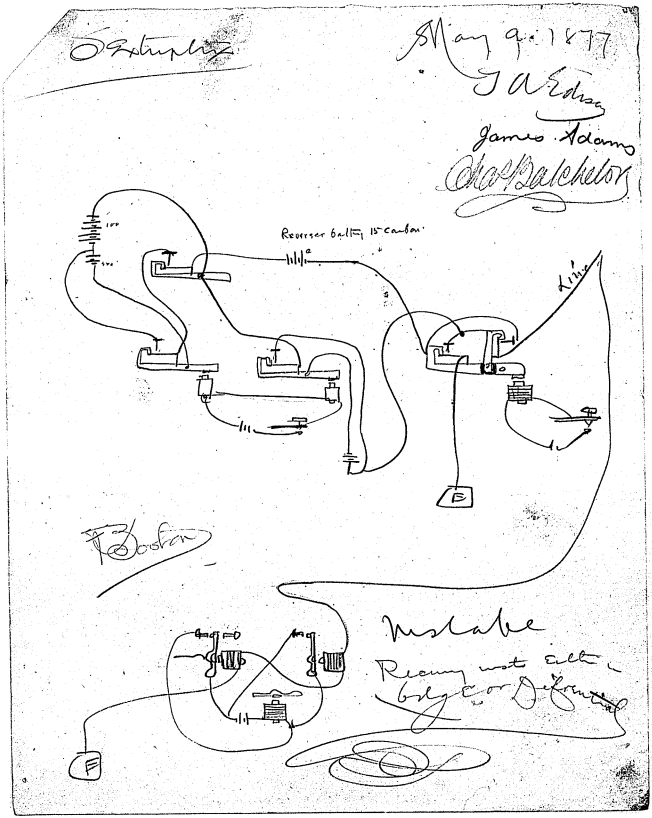
F. W. Edison

James Adams

Chas. Batchelor

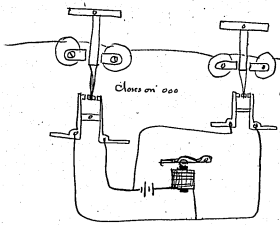



Mary 9th 1847
James Adams

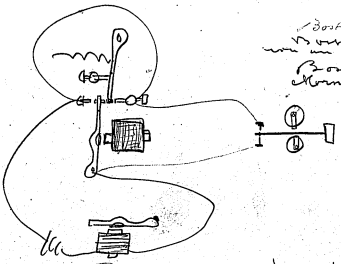

Reverser battery 15 cells
Mistake

Sextuplex. May 9 1877.

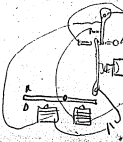
76
Patented October
1877
James Adams



Boston Boston
Boston
Morning Boston

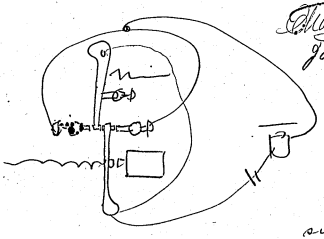


Any is the number of our transmitter made glorious summer by this date of your York

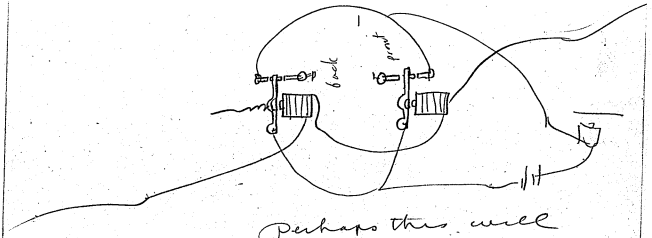


Octuplex

May 9 1977
T A Dawson
Charles Tatum
James Adams



This works about same as the simple lever in front. perhaps not quite so well.



Perhaps this will replace -

Works well.
perhaps better than lever relay.

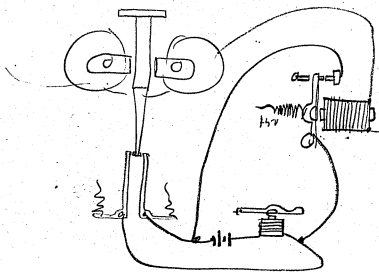
Duplex

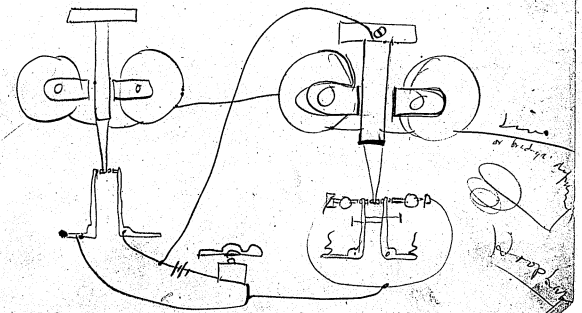
May 9. 1879

F A Gilmore

Chas Batchelor

James Adams





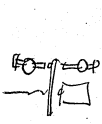
Patented

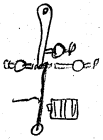
May 9 1877

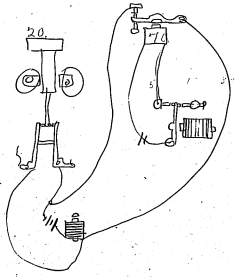
G. A. Cairns

James Adams

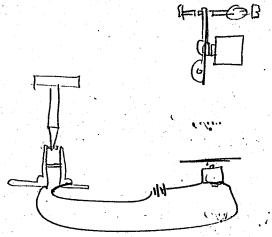
Edw. F. Baldwin

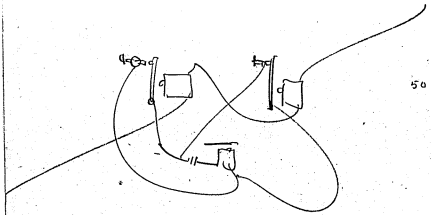


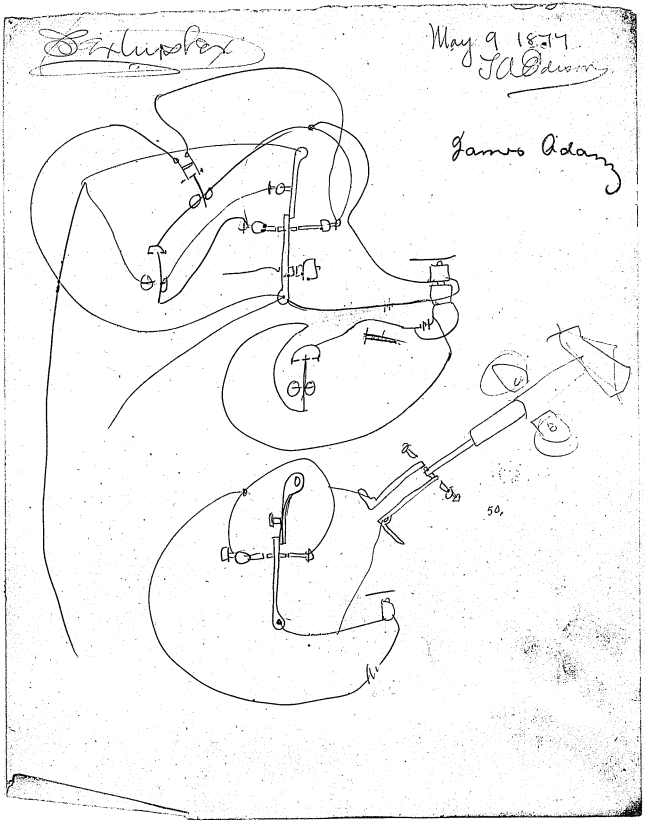




May 9 1877
T.A. Edison
Charles Batchelor
James Adams





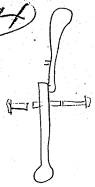

Kinetoscope
May 9 1894
T.A. Edison
James Adams
50.

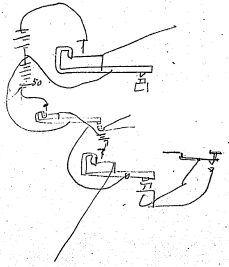
Telegraph

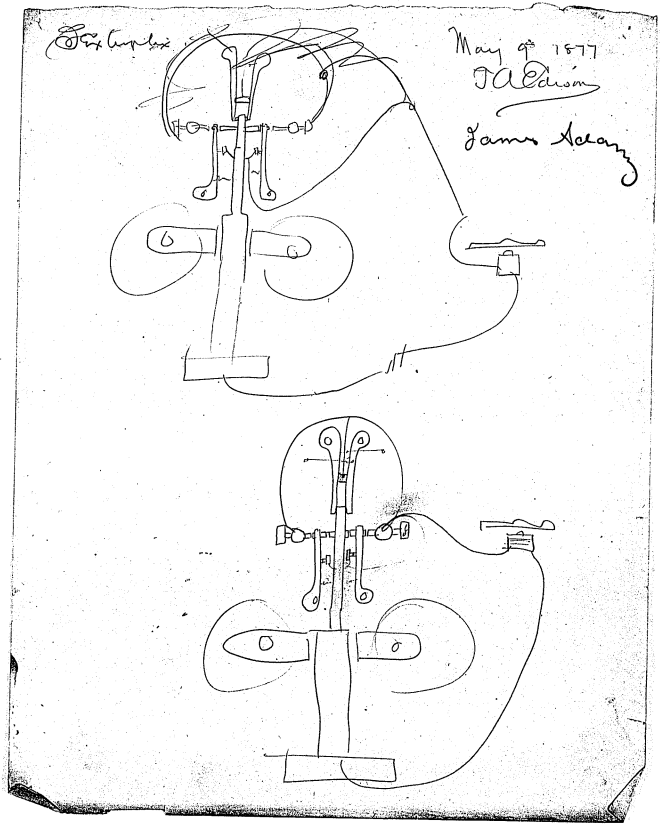
May 9 1877

J. Adams

James Adams






May 9th 1877
T A Edison
James Adams

25 -

50,

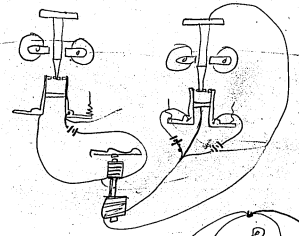
Sextuplex 25,

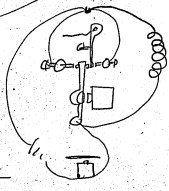
May 10 1877.

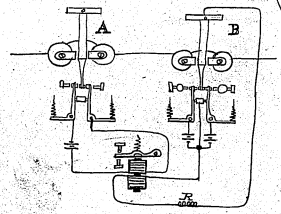
J. A. Edison

Chas. Batchelor

James Adams

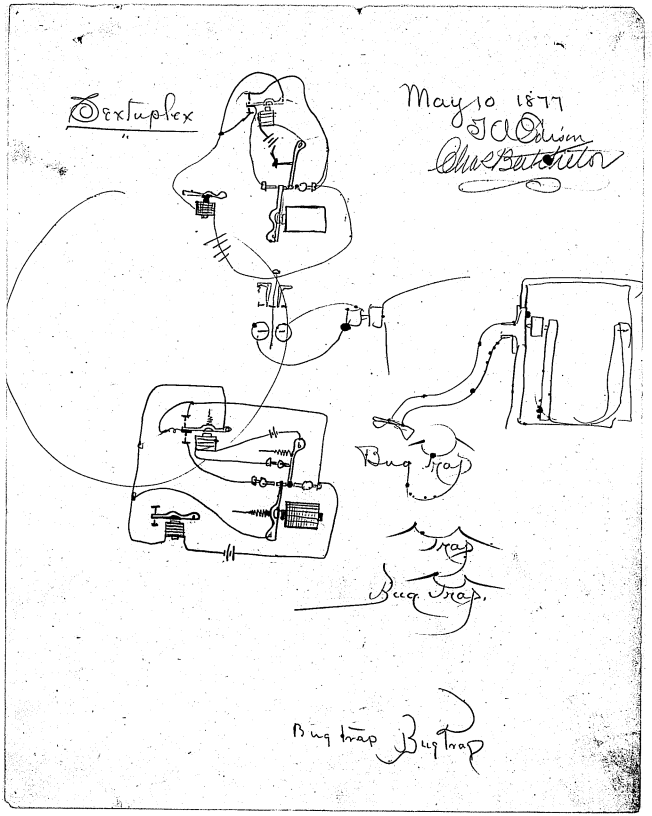






B may be of lower resistance than A

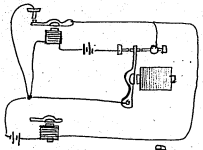
P


Sextuplex
May 10 1877
T A Edison
Bug Trap
Bug Trap
Bug Trap
Bug trap Bug Trap

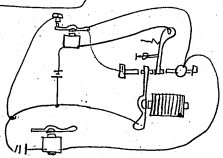
Sextuplex.

May 10 1877

T A Edison
Witness
James Adams

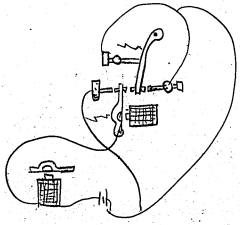


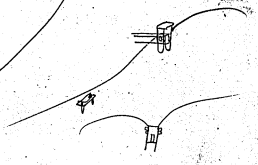
good bug trap for reversals for Quad



Bug trap for "Sextuplex"

1



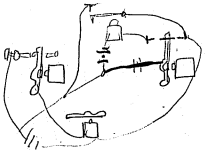


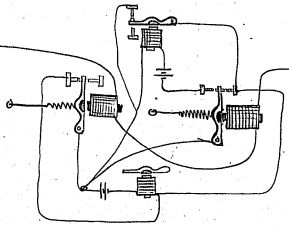
Stuplex

May 10 1877

J A Edison

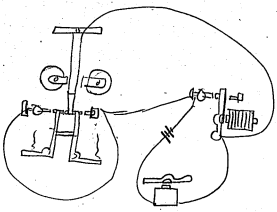
Thos Watchen

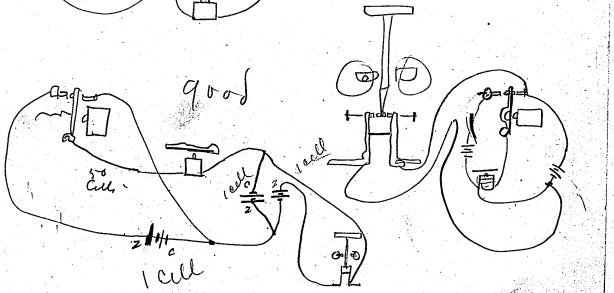




Duplex

May 10 1877
Ja Edison
Chas Batchelor



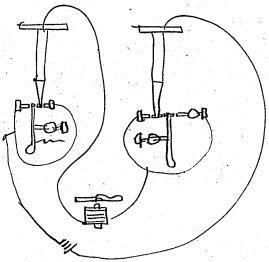


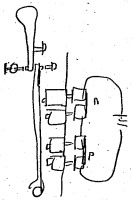
Sextuplex

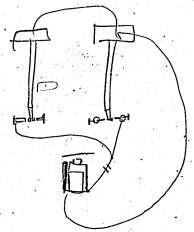
May 10 1877

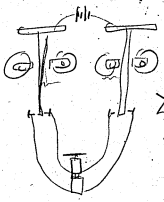
T A Edison

Chas Batchelor









Duplex

May 10 1877

E. J. Adams

Margin for 8 with 50 cells 25 to 75 Chas Batchelor

A. 50 ~~coulomb~~ of for A 30 to 30, B closed 150, margin for 150, 100,
50 Coulomb B "

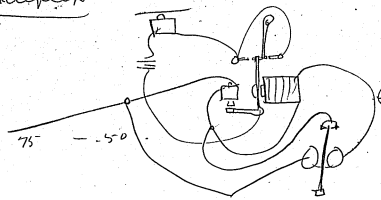
with A on or off. B works either with a 150 or a 100,
if B has on 30 cells,

100, 200,

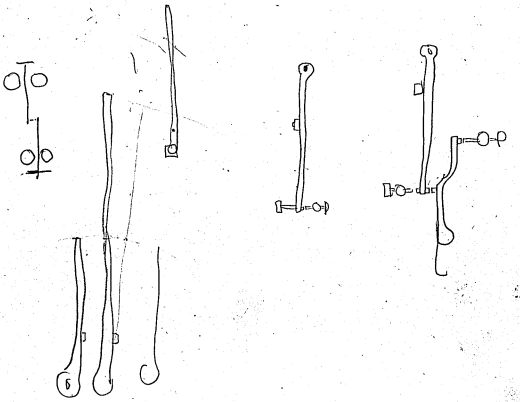
Sextuplex

May 10
1877

T A Edison
Chas Batchelor
James Adams



70. place 50 1st Transmitter
80 Bells, place 100,



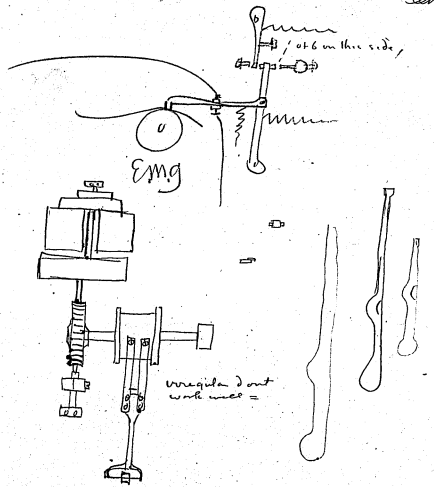
1

Sextuplex –

May 10 1877

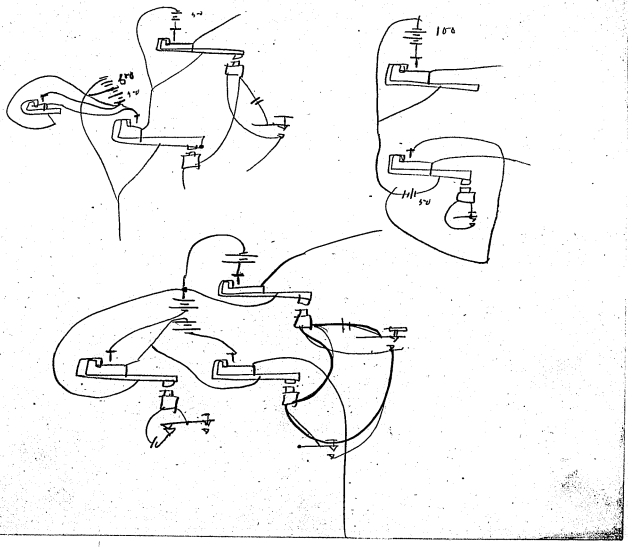
T A Edison

Chas Batchelor



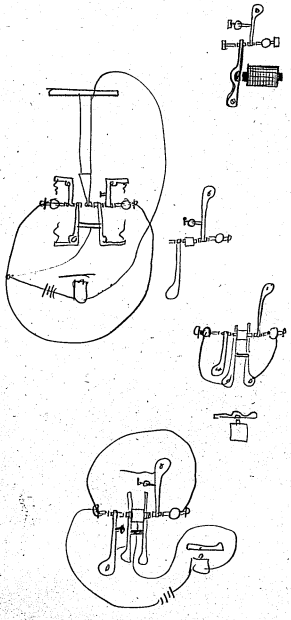
Sextuplex

March 10 1877
J Edison
Charles Batchelor



Sextuplex

May 10 1877
J A Edison
Extra Patented

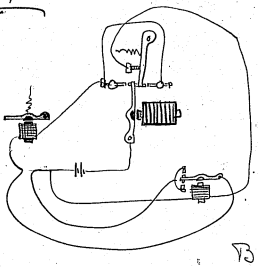


Duplex

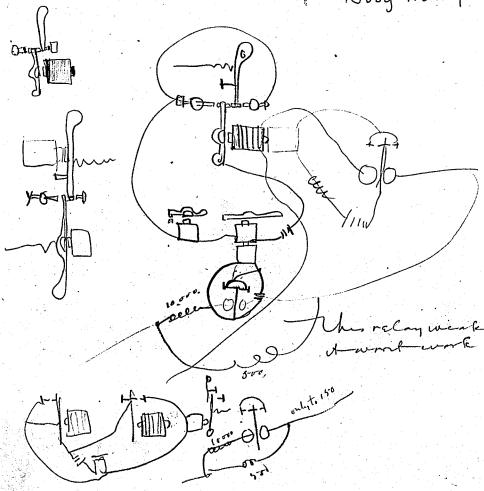
May 10th 1877

T. A. Edison

Chemical Telegraph

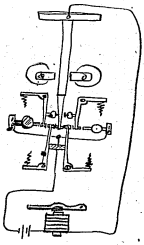


Boog Trahop



Dextuplex.

May 10 1877.
T. A. Edison
Chas Batchelor



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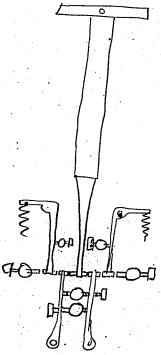
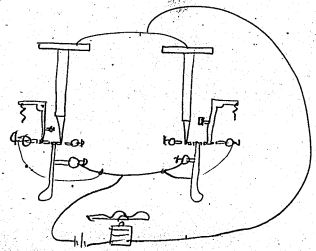




Sextuplex

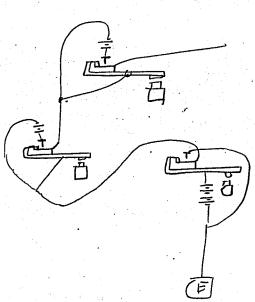
May 10. 1877

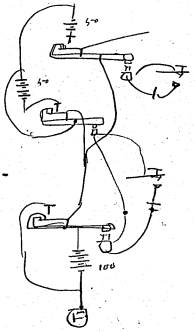
Thos A Edison

Mary Batchelor

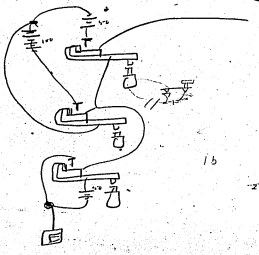
50
50.

100.





worst work



150
40
190

250

15

150
50
50
40
290

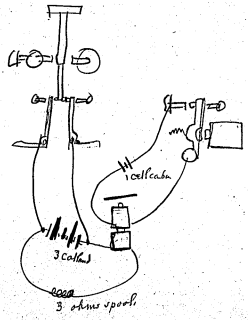
Boxty

May 14 1877

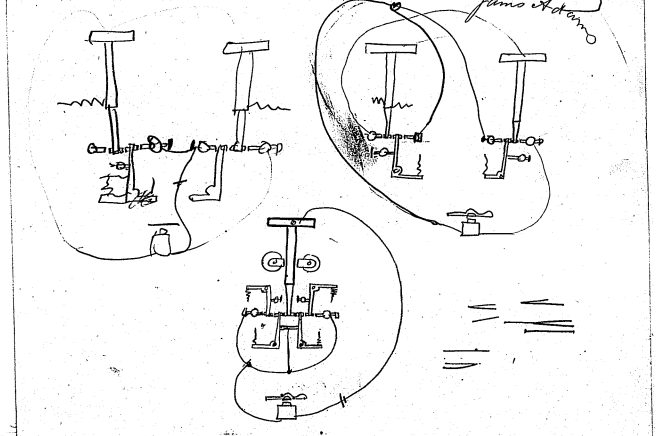
J A Edison

Chas B Batchelor

James Adams



Sketches May 11 1877

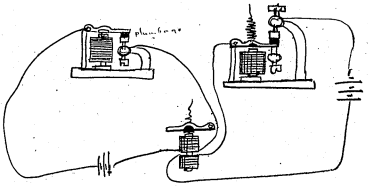


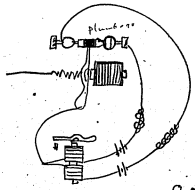
Dextruplex

May 11 1877

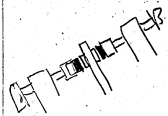
T. A. Edison

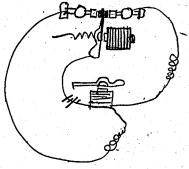
Chas. Batchelor





Measure Relay



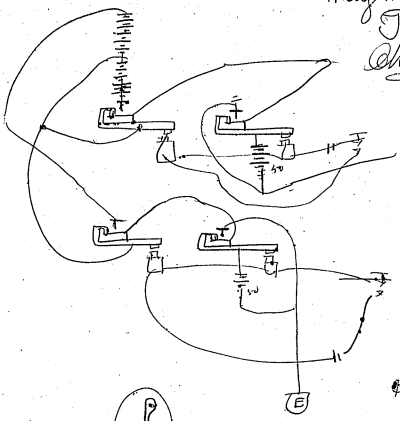


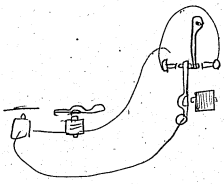
Duplex

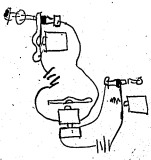
May 11 1877

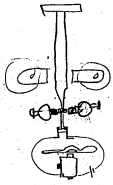
T. A. Edison

Chas. Batchelor



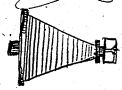


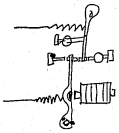


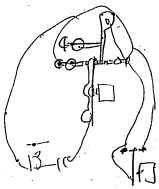


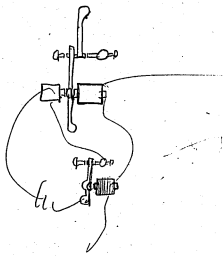
Dentaphex

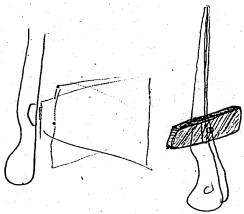
May 11 1877.



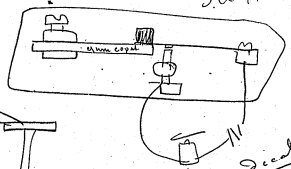




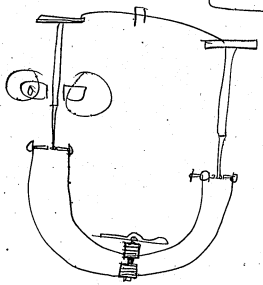


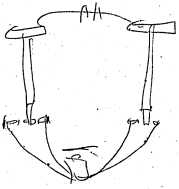


Baptisphere & Thermo indicator May 11 1877
J.A. Fitch



Thermo indicator

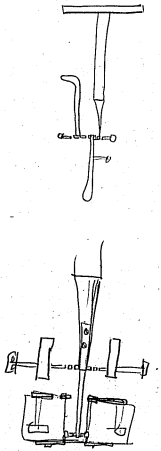




May 11 1877

J. A. Bohm

Chas. Batchelor

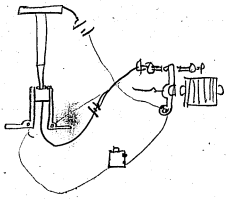


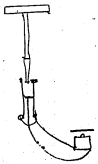
Disclosure

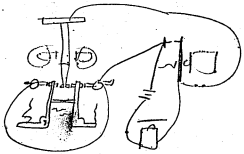
May 12 1877

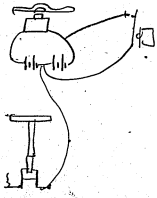
Jas Edwin

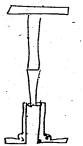
Chas Batchelder

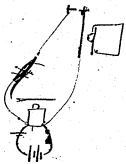






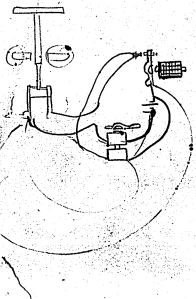






Exhibit

May 12 1879
T A Edison
Chas Batchelor

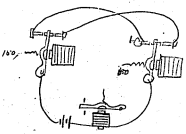


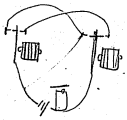
Ex Emplex

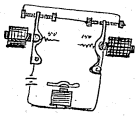
May 13 1877

J A Edison

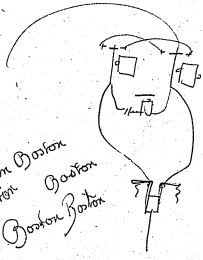
Chas Batchelor

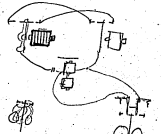






This works the best of all. Reversals and the 100@50 mean (almost) don't affect it enough to prevent fair signalling.





Boston Boston Boston Boston Boston Boston

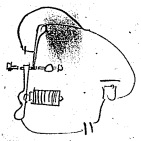
Try

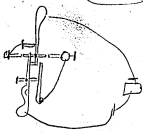
Try

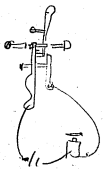
Diastrophic

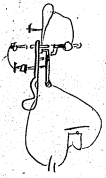
May 13, 1877

J. A. Sidell







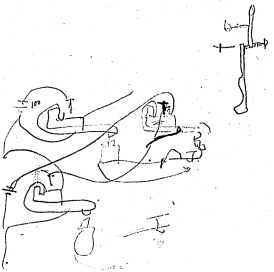


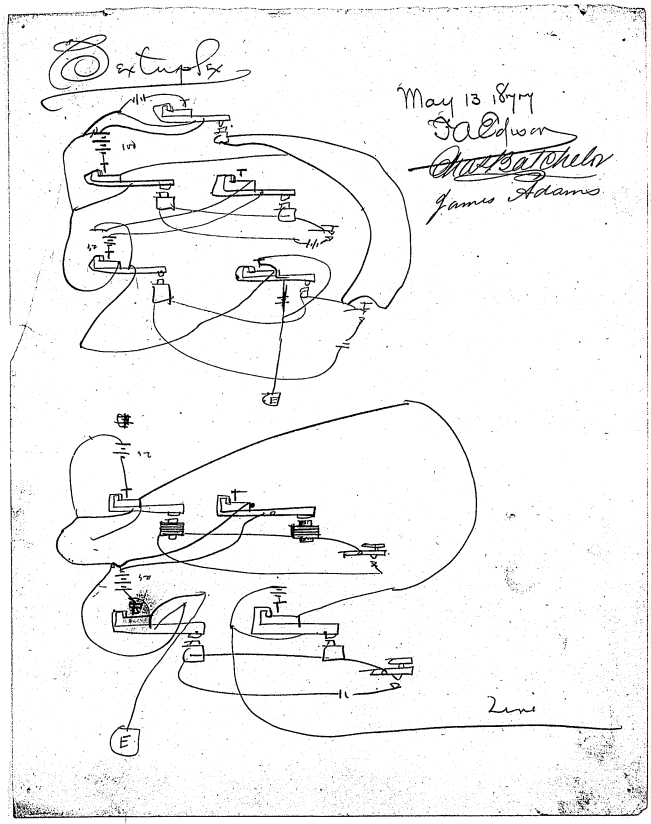
Description

May 13 1847

T. U. S. Navy

Matthew Fontaine



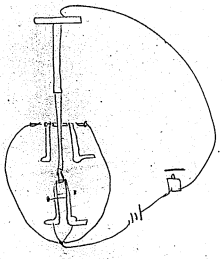

Quintuplex
May 13 1879
T.A. Edison
Charles Batchelor
James Adams
E

Specification

May 13 1877

To Edison

Alex Batchelor

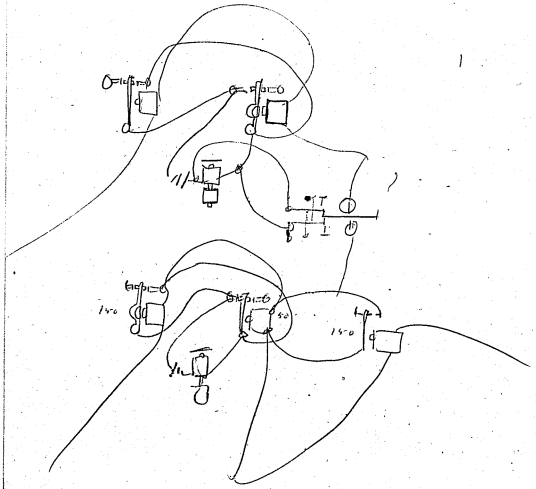


Duplex

May 13 1877

T. A. Edison

Electrician



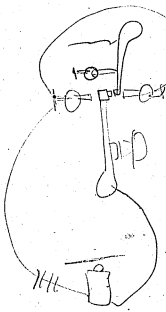
Sculptor

May 13 1877.

T A Edison

Chas Batchelor

James Adams



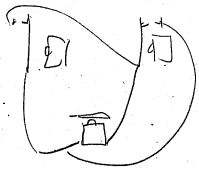
Bx Lindsay

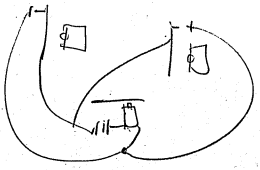
May 13 1877

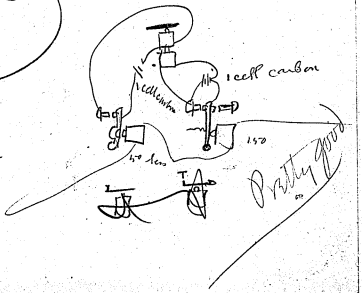
T A Edison

Chas Batchelor

James Adams







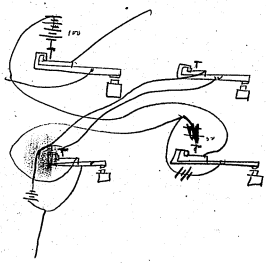
Duplex

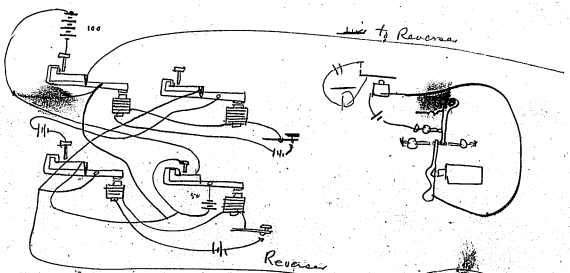
May 13 1877

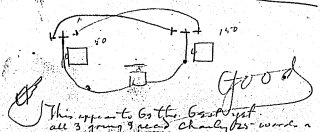
T. A. Edison

Chas. Batchelor

James Adams.



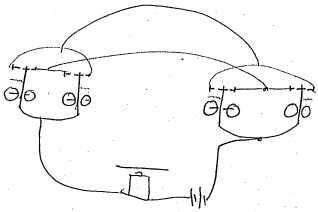


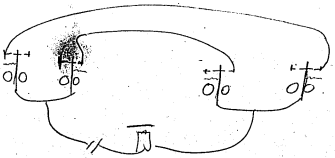


May 14 1877

T. A. Edison

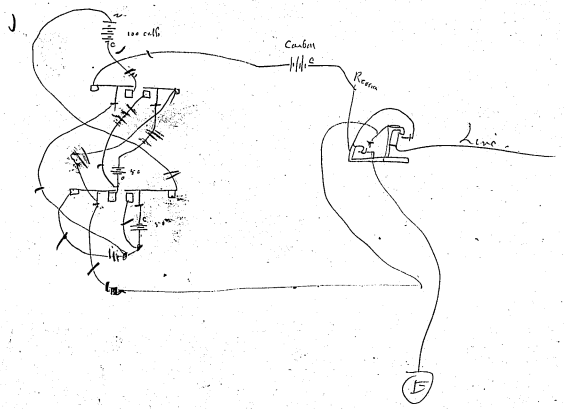
Edison Edisons

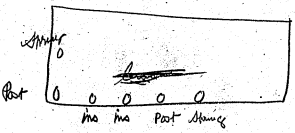




Dextrograph.

May 14 1877
T A Edison
Ra? Batchelor





Witness

T.A. Edison

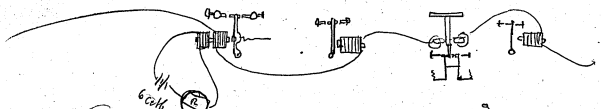
May 14 1877

T A Edison

T A Edison

T A Edison

Thos A Edison



Witness

Thos A Edison

Witness

Edison

T A Edison

Edison

Edison

Edison

Edison

Thos A Edison

Thos A Edison

Thos A Edison

Thos A Edison

Wm Orton

Wm Orton

Wm Orton

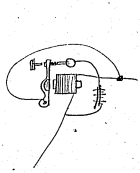
Wm Orton

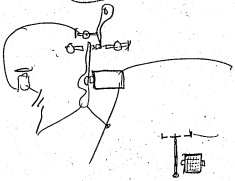
Dextuplex

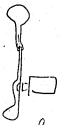
May 14 1877

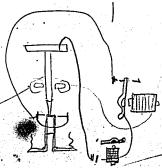
T. A. Edison

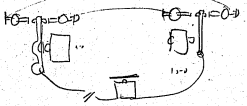
Chas. Batchelor

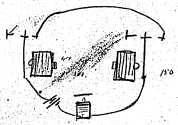








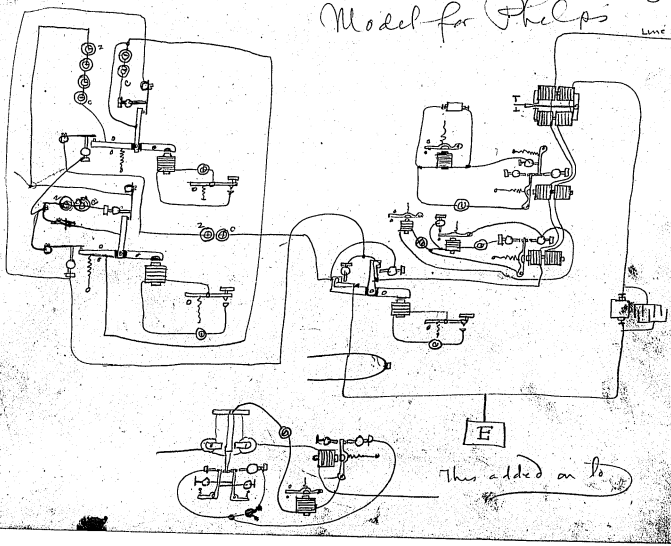




Sydenham May 14 1877

Model for Phelps

T A Edison



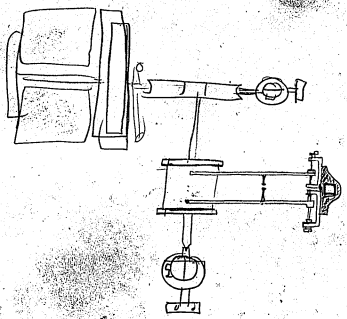
Duplex

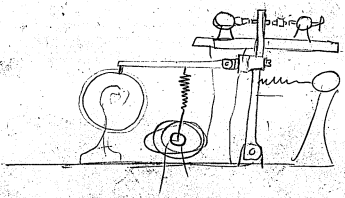
May 14 1877

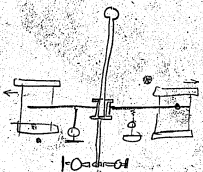
T. A. Edison

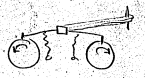
Delld. May 19th 1877

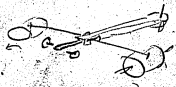
Jno. Ritchie Jr.









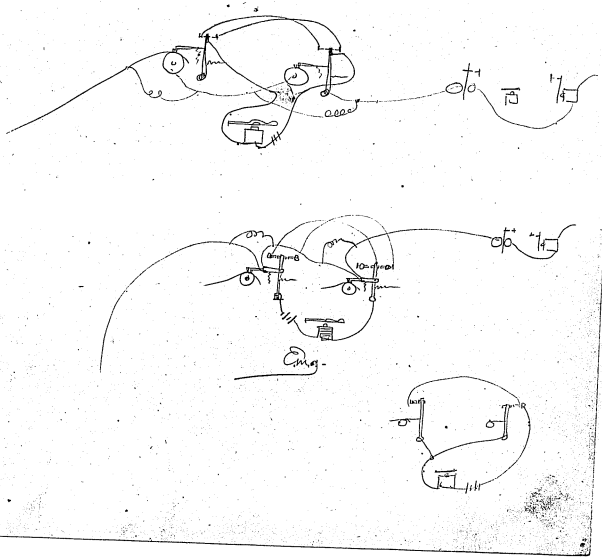


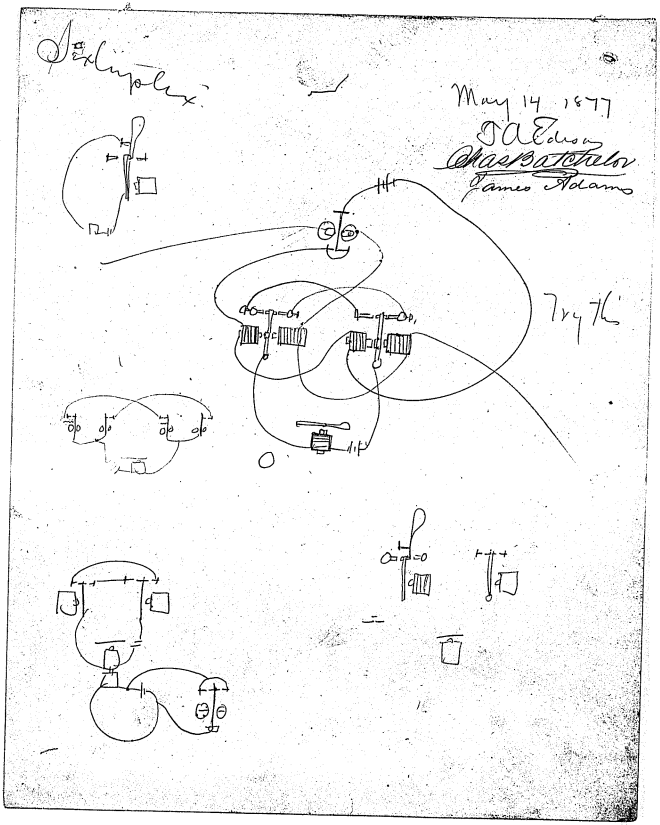
1/14
102

Duplex

May 14 1877

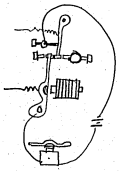
James Adams

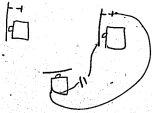



May 14 1877
T A Edison
Menlo Park
James Adams

Sextuplex.

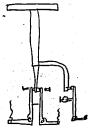
May 14 1877
T. A. Edison
Chas Batchelor
James Adams

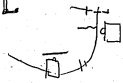


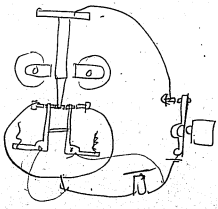


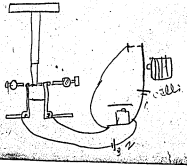
Stitt

May 14 1877
7a Sale
Chas Batchelder
James Adams









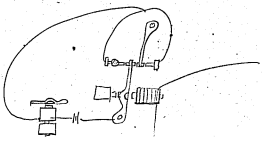
Duplex

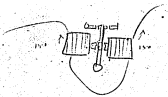
May 14, 1877

T. A. Edison

Chas. Batchelor

James Adams



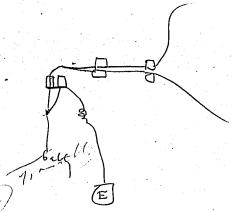


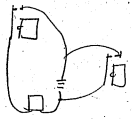
Duplex

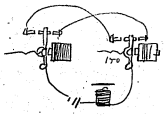
May 18 1877

go Hyo back to head ants stunt for clearing Quad Rem &c

Chas Batchelor
James Adams







Thomas A Edison

Thomas A Edison

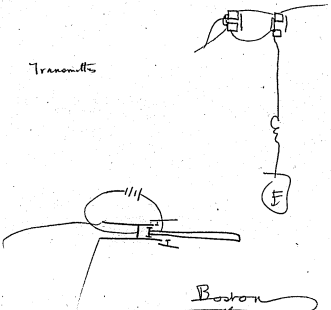
May 18 1877

T A Edison

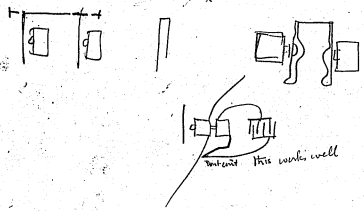
Chas Batchelor

James Adams

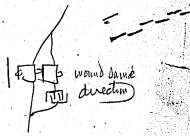
Transmitter

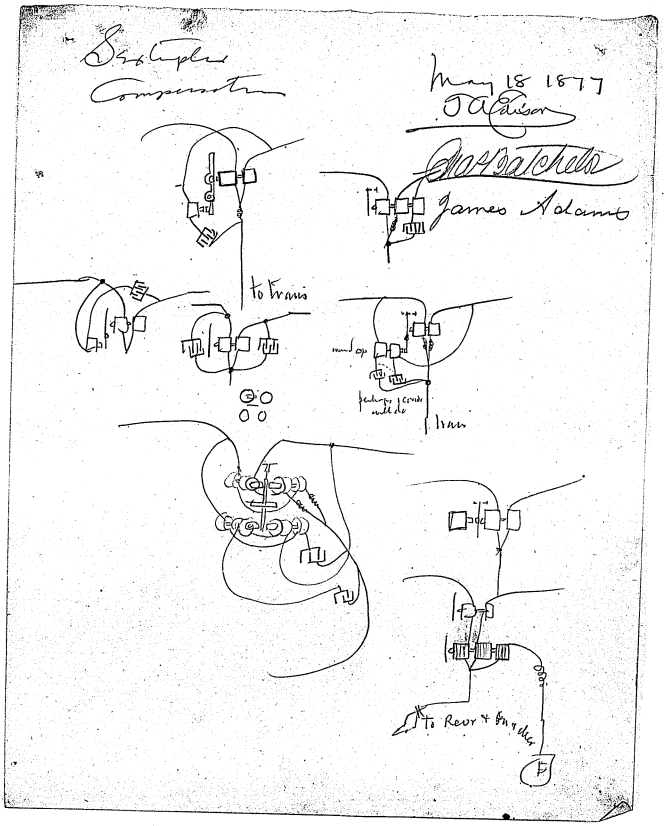


Boston



Instrument Works well




Stock Ticker
Compensator
May 18 1877
T. A. Edison
Assignor
James Adams
to Trans
Trans
To Recr & Trans

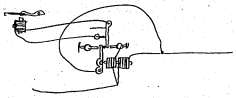
Duplex

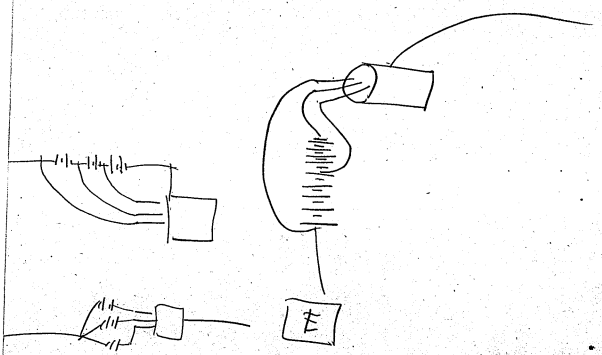
May 18 1877

Joe Stearns

Thomas A. Edison

James Adams

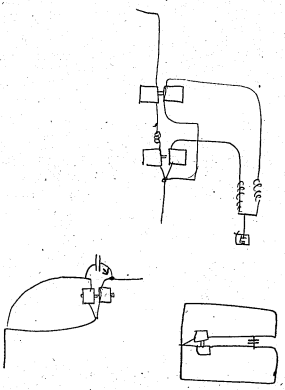




Sir Cuplex

May 18 1877

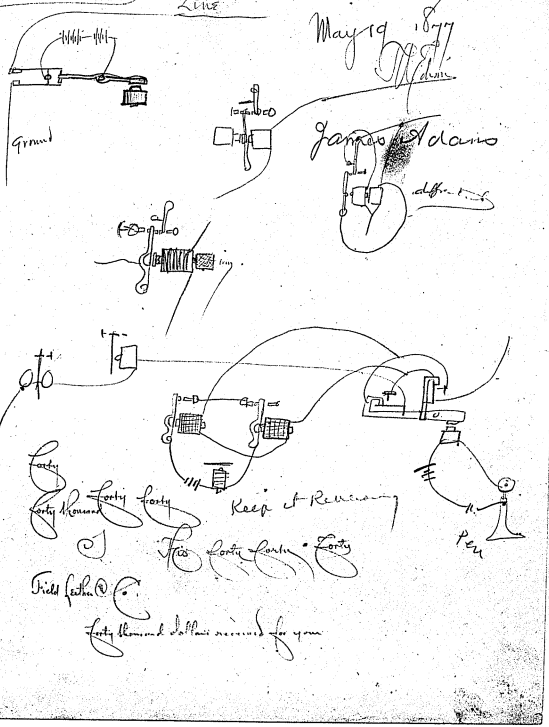
James Adams



Duplex

Line

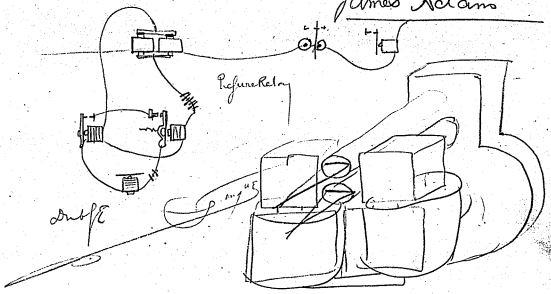
May 19 1877

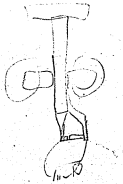


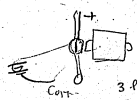
Duplex

May 19 1877

James Adams

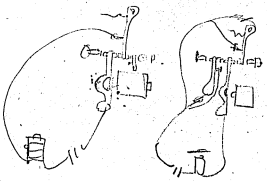




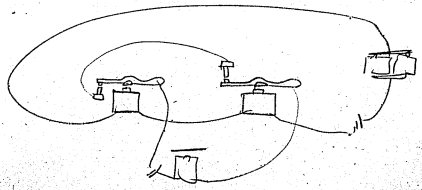


3 Layers Gamble wire
2 cells Carbon; not
Ohming mfg with
100 coil. = 4600
Ohm

May 19 1877
T A Edison



3 mc + dec no Rev

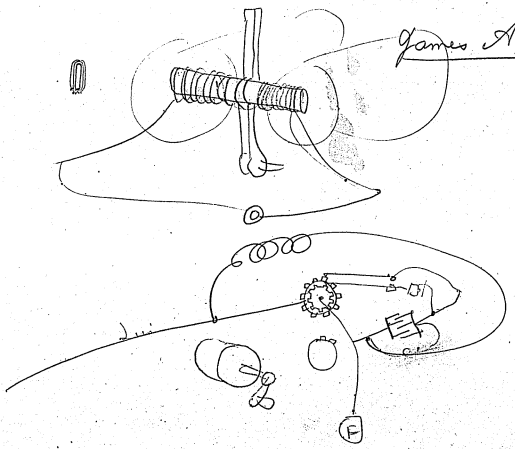


Duplex

May 19 1877

T. A. Edison

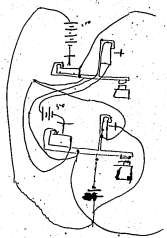
James Adams

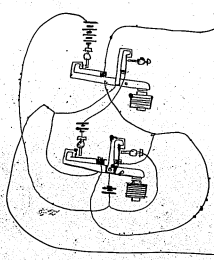


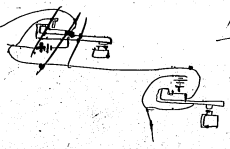
May 20 1877

Chas. Batchelor

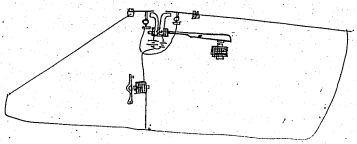
James Adams





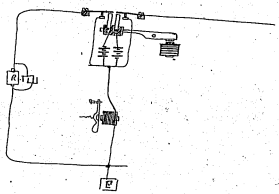


May 24 1877
T. A. Edison
James Adams

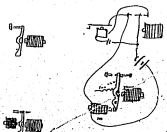


Principle of Balance in
Duplex Quad & Sextuplex transmitters
without bridge adjustments

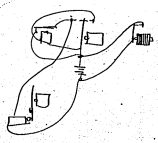
May 24 1874
J. A. Edson
Chas. Batchelor
James Adams

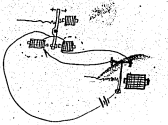


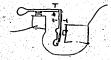
Method of the Edison
Duplex Telegraph - 9 miles distance
between Electric Duplexing
Connection 40 cells Callaud
to each pole pair =



Sextuplex



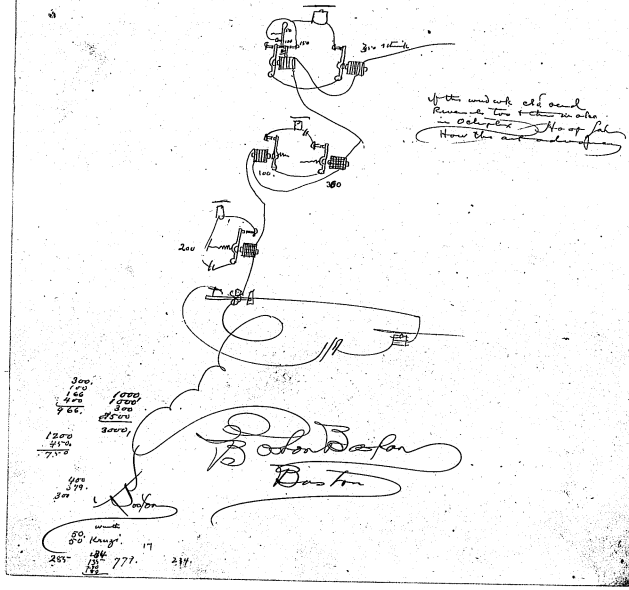




Discharge
without reversals
3 inverse discussions

May 25 1877
J A Adams

James Adams
Chas Batchelor

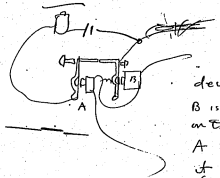


May 25 1897

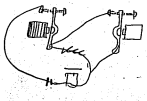
J. A. Adams

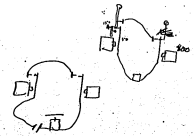
Charles Peterson

James Adams



device for reversing thro A & B is adjusted to stop closed on the permanent Circuit. A to closed on the reversal it closes Local through Seen of B which at the moment of reversal flies Contact with the Rever of A and then prevents the Localcer and from Being Grounded

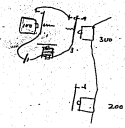




50 _ 0

100 _ 150

200



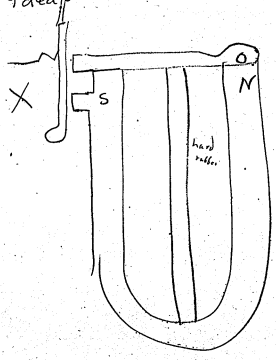
Discovery —

May 26 - 1877

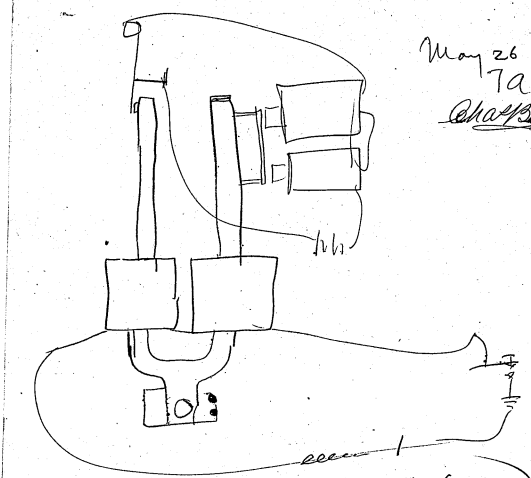
If you look very closely at any printed matter so that the print is greatly blurred and you see double images of the type and one of the double images is always blue or ultra violet =

Good Idea =

Charles Batchelor

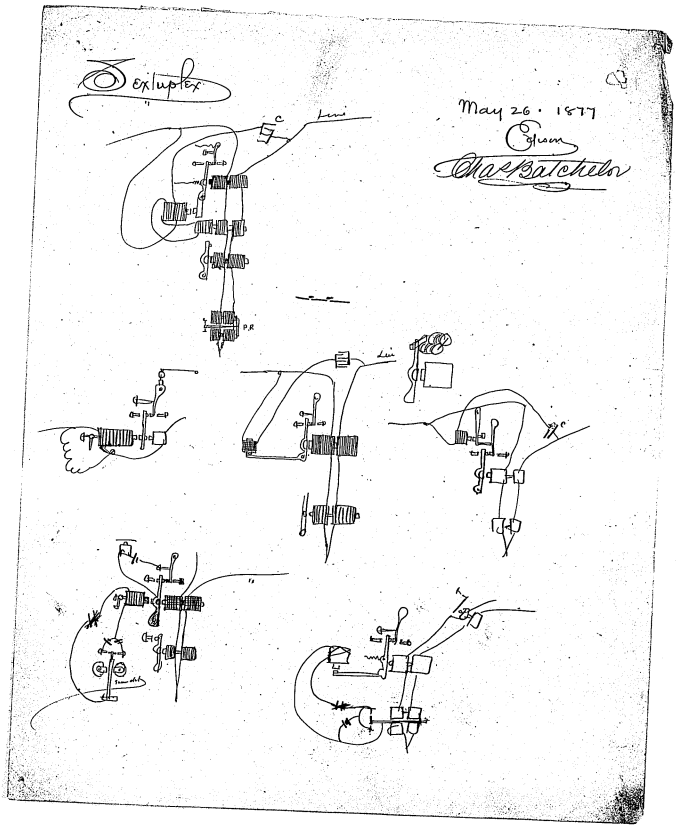


Expansion causes free poles at X & attraction magnet. This idea may be carried out & using it always =



May 26 1877
T A Edison
Charles Batchelor

magnetizing the shank after the fine and
fine wire by the Morse = might have
a 1/2 dozen — and among that while
one wound after its fine to a hundred, one
the Effect of the other would be to
make upper or Power Multiple

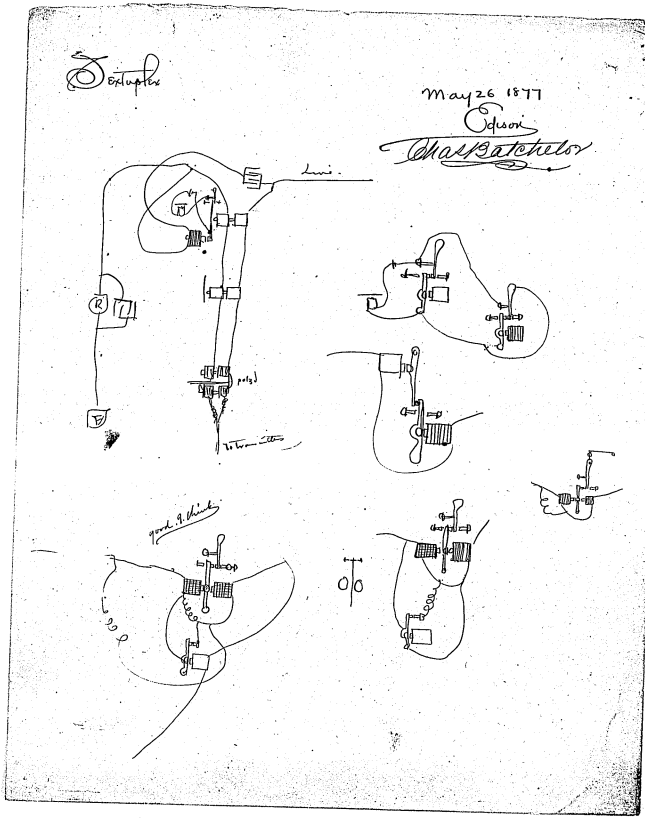

Duplex
May 26 · 1877
Chas Batchelor

Duplex

May 26 1877

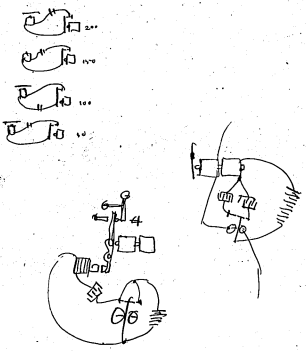
Edison

Chas Batchelor

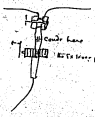


Extruplex

May 26 1877
J.A. Edison
Chas Batchelor



Attach in Quad to distant to take compensate for the polarized relay on the effect of taking off & operating on the Extra Battery to neutralize the Reverse ab signals here &c

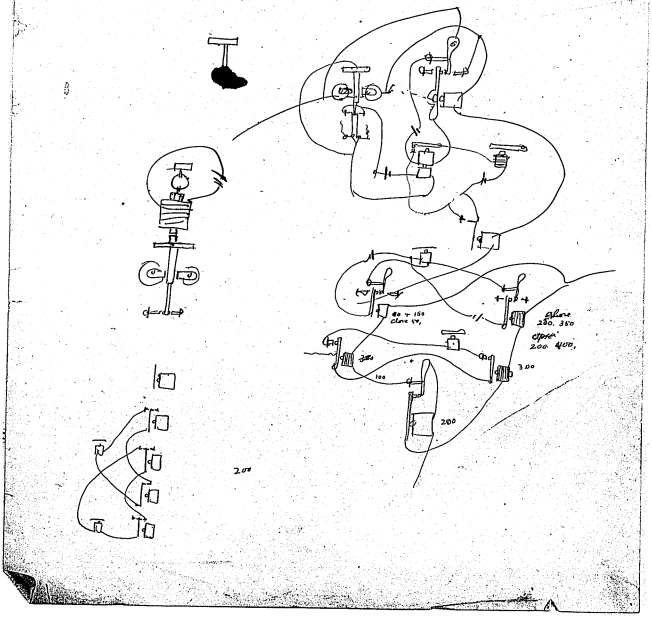


Duplex

May 26 1877

Edison

Chas Batchelor



Exhaustless

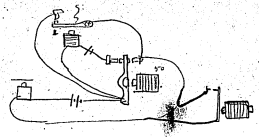
May 30 1877

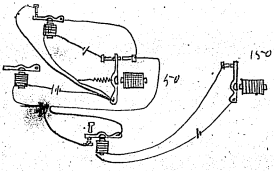
J A Edison

Edward Batchelor

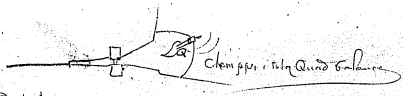
150 James Adams

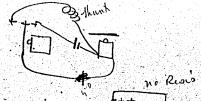
good Try

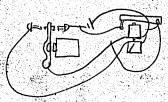




good try







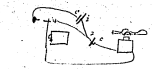
good Try

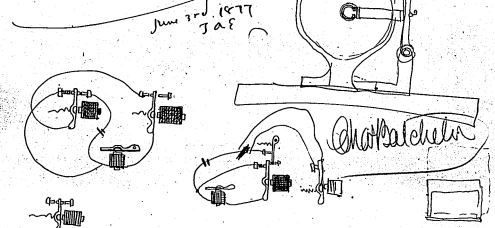
Duplex

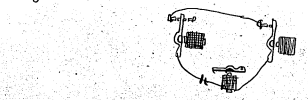
May 30 1877

JA Adams

James Adams

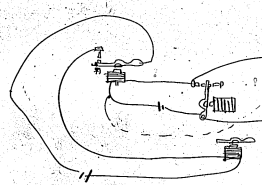




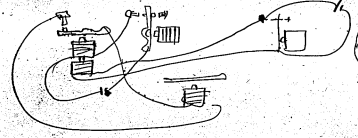


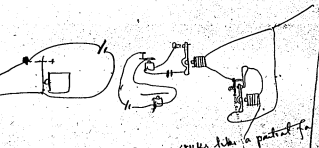
Dorlinglas

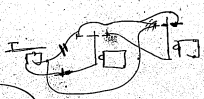
June 15-77



Pretty four but reverse ele
touch X





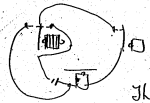


don't bother if you wish

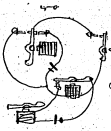
42

Duplex

June 1 1877
Edison



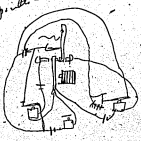
The works splendid
Scarcely a buzz in it
Besides its very Duplex

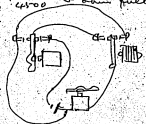


I think a repeating Sounder better G portion are owing to 150 relay working Sounder not shunted gives bright working when in 40 shunting Sounder in when Comes heavy hence all right no Buzz that working worked by micrometer screw of Sounder strength proved very the Sounder the Rounder Sounder screwed a Duplex thus I puts regulate Sounder in but 9t gave like 9 then put in Duplex 99 Sounder worked worked better scarcely buzz but it no great of any upon or strength Sounder with State off line 4100 G ohm full Coils 9t works quite even scarcely a buzz =

Smyth

Nothing good Contact close enough adjustment without pulling off string

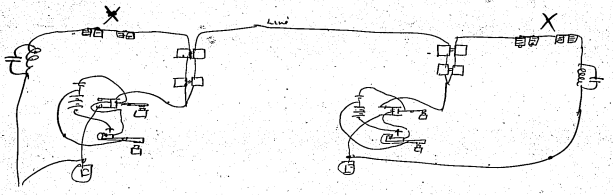




Pulling G in don't appear to make it any better =

Stockticker

June 1 1874.
T A Edison

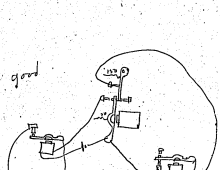


The object of the Electromagnets X at both ends is to create the same Conditions upon the artificial as there is on the line, and it is impossible to obtain an accurate balance unless the 2 relays of X are inserted to Counteract the Effect of the 2 Receiving Relays at the Both Stations & Vice versa =

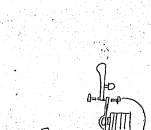
Sextuplex

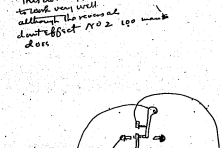
June 1 1877

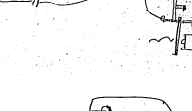
Edison

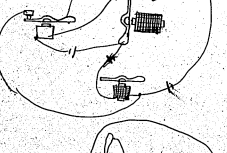


This dont appear to work very well although the reverse at 1 without effect NO 2 100 ohms shorts







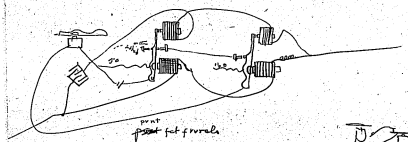


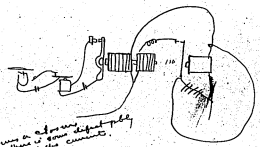
This appears to give a about ways to Sounder when 1 is open & NO 2 100 ohms after closing is opened = Reverse at effect shorts when 2 is closed =

This is about same thing as X on previous page except only 1 Relay used

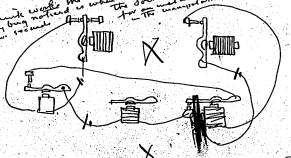
Sextuplex

June 1 1877 -

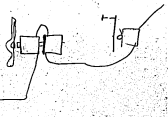


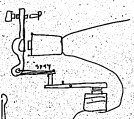


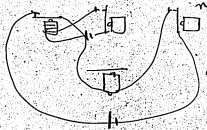
Three 9 thumb weights the first 50 turns of the armature, 2 turns at a time, the second 50 turns, 1 turn at a time, adjustable by the two nuts on the magnet cores.



Battery Governor Switch

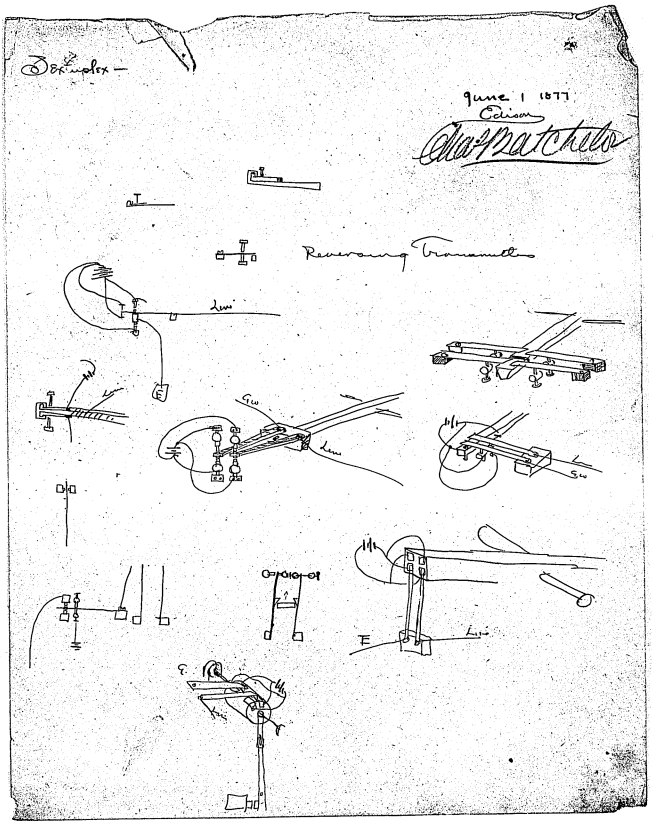






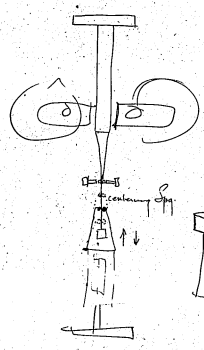
These don't work as well as X Coil in which less speed for the required

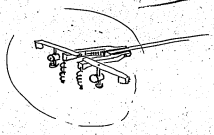
FBC

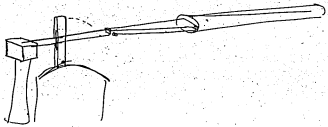

Duplex
June 1 1877
Edison
Reversing Commutator
E
E

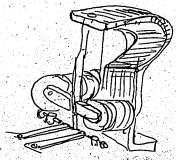
Sketches

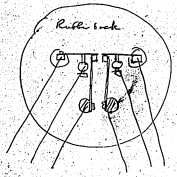
May
June 1. 1877
Colwood

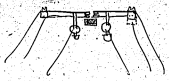












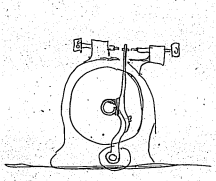
Dennys

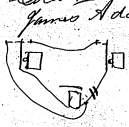
June 3 1877

Ja Edison

Chas Batchelor

James Adams





James Edmund Scott

Thomas Edwards

The Scottish Naturalist

The

The boast

The boast of heraldy

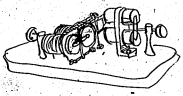
The boast of her

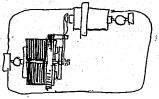
Port of Tedas

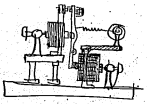
The boast of heraldy of pomp and power
all that beauty all that wealth ere
gave alike await the inevitable hour
The path of glory leads but to the
grave Grim visaged War has
smoothed his wrinkled front but

June 4th 1877

James Adams







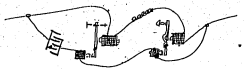
Sextuplex

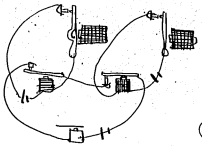
~~May~~ June 5 1877.

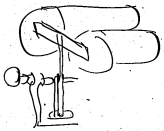
T.A. Edison

Chas Batchelor

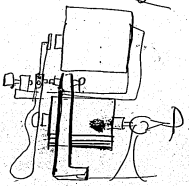
James Adams







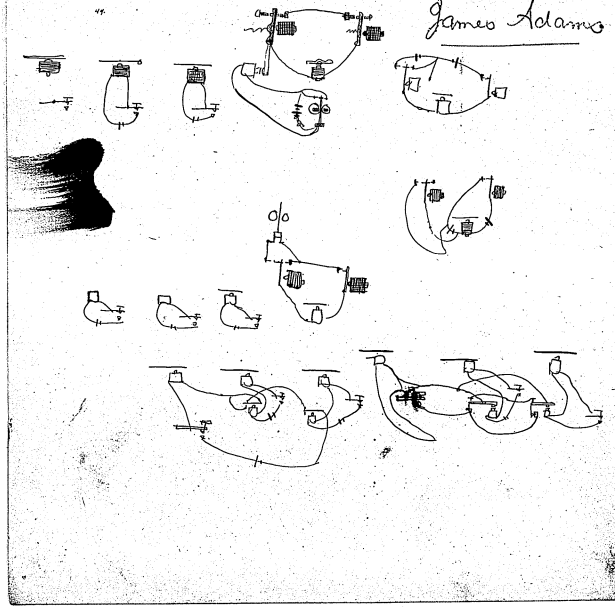
Krueger



June 5 1877.

Improvement

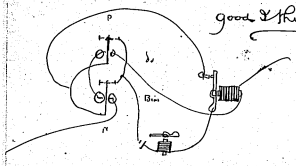
James Adams



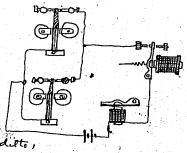
Jan 5 1877
Edin

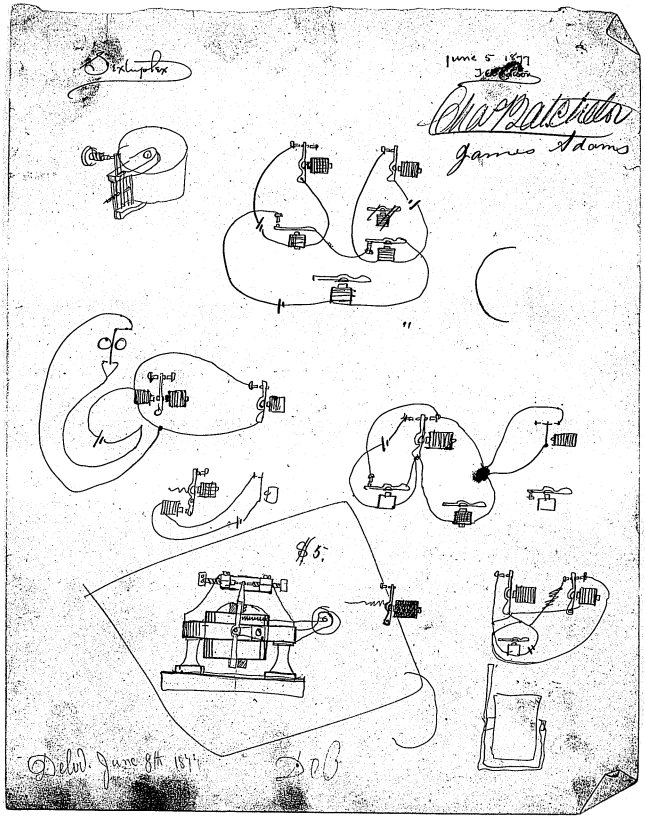
good & Rink

James Adams



The reversals gave a kick
Due to break in Continuity
in the passage of the
polarized Currents.




Duplex
June 5 1877
James Adams
Delvd. June 8th 1877

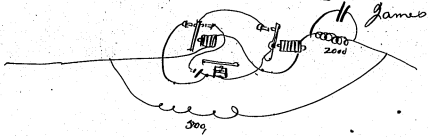
Duplex

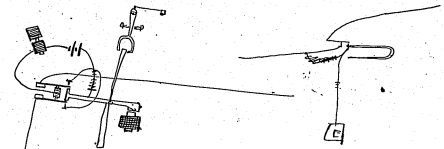
June 5 1877

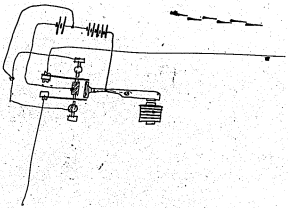
Date

Transatlantic

James Adams

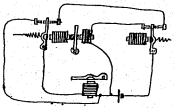


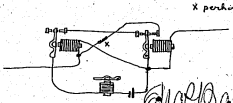




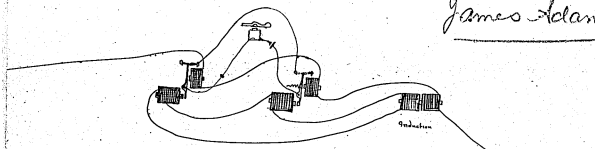
Sextuplex.

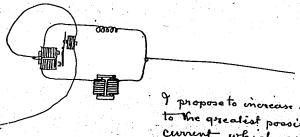
June 6 1877.



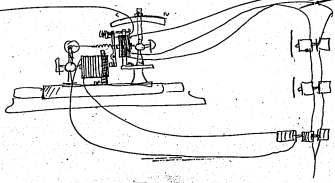


Respectfully
James Adams





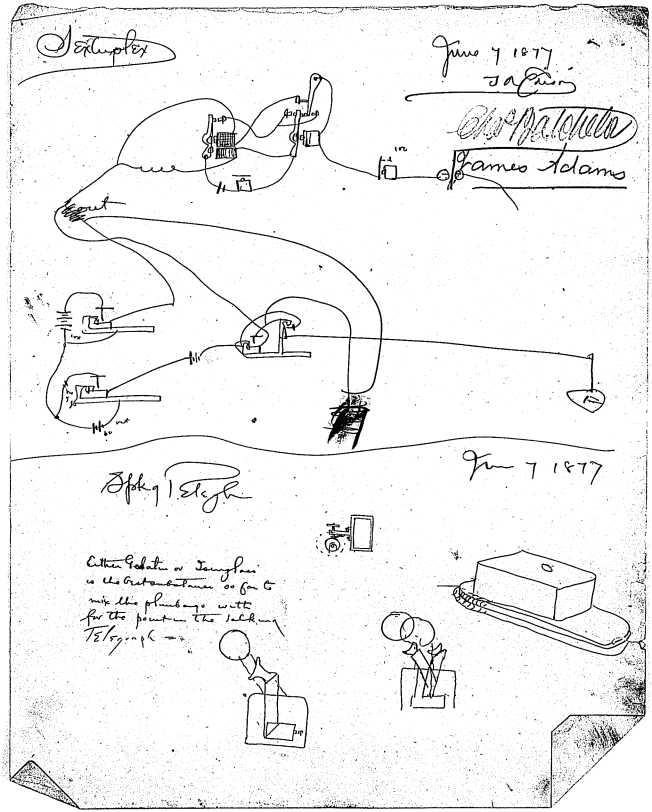
I propose to increase the inductive current to the greatest possible extent and use this current which appears at the moment of reversal to act upon a seperate Electro magnet, which tends to pull or attract the relay lever in the same direction as it is attracted by the magnet in the main line circuit, and by a proper proportionment of the two magnets acting on the same lever I hope to make the inductive current magnetism in one magnet equal in strength to the main Current magnetism in the other magnet. thus bridging over the interval of no magnetism in the main line magnet by a magnetism of equal power in the [illegible]

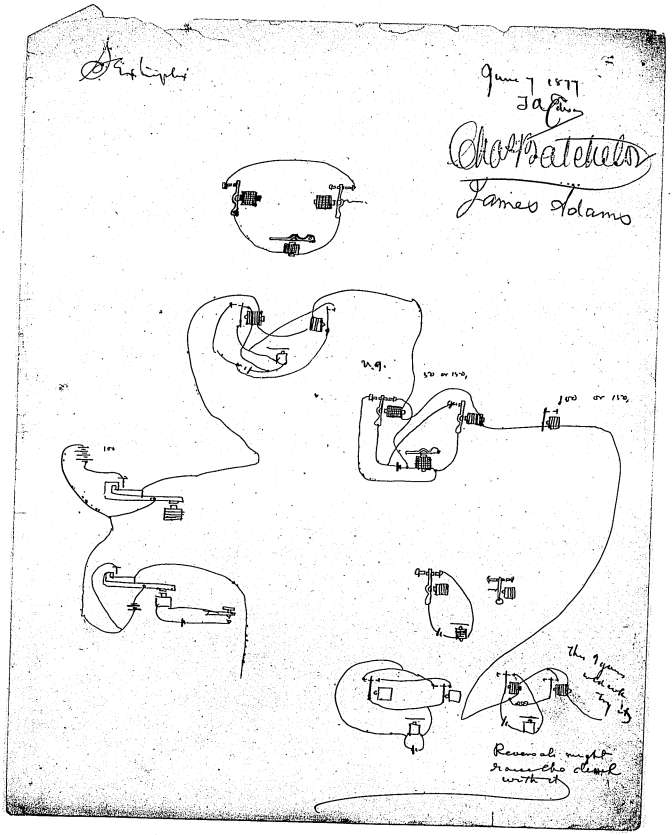


James Adams

Compensation by induction
Secondary Magnet

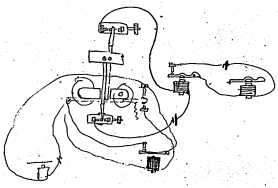
Rankin Water Power Power Power Power Portland

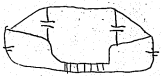

June 7 1877
James Adams
June 7 1877
Cutting Gobbets of Sawdust
in the Automaton so as to
mix the plumbago with
for the promotion the Idleness
Telegraph

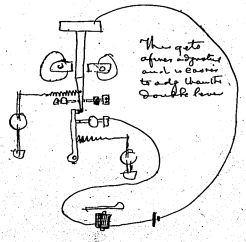

June 7 1977
Jack
Choo Patents
James Adams
M.G.
50 or 150
100 or 150
1m
Remind might remember about work

Duplex

June 8 1877
T. A. Edison
Chas Batchelor
James Adams







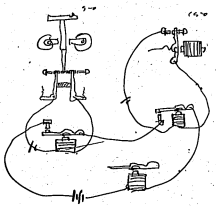
Sculpter

June 8 1877

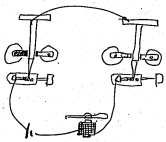
Edison

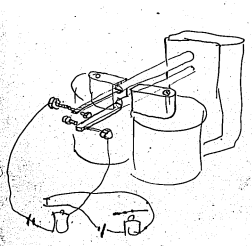
Witness

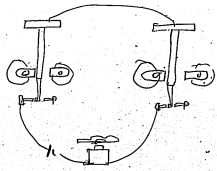
James Adams



Thermostatic Governor



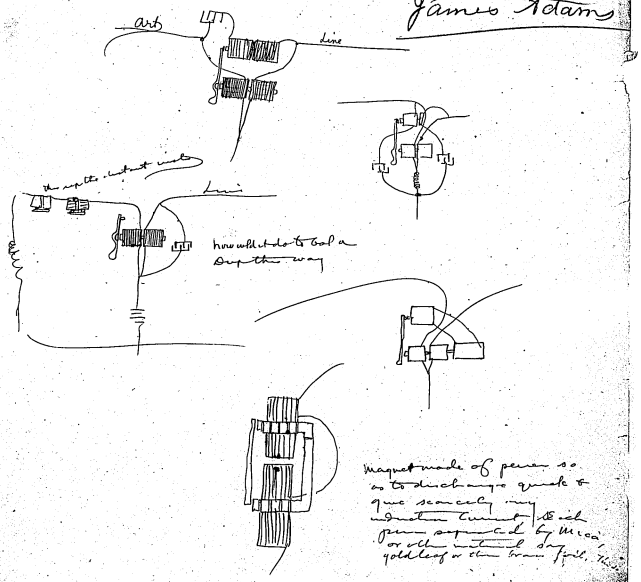




A. S. Sexiuplex

June 10 1877.

Chas. Batchelor
James Adams


Art
Line
the upper contact wire
Line
How will it do to Coil a Dup the way
Magnet made of permanent so as to discharge quick & give scarcely any Induction Current / Soft iron preferred by Mr. Edison or other metal of very good Conductivity & free from Iron, &c.

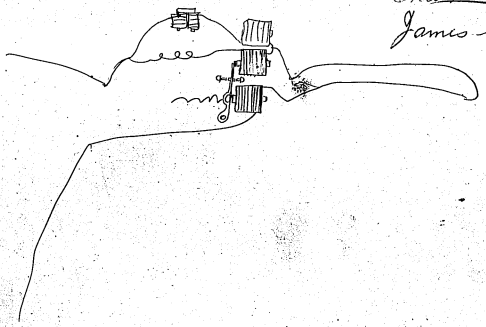
2 page

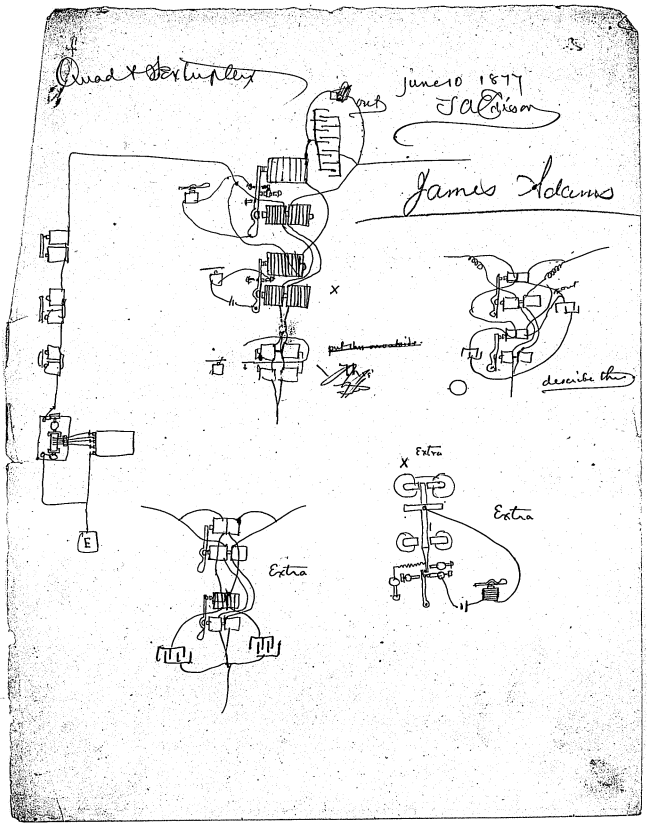
that will send the type wheel ahead & letter for a positive & 1 for a negative, (perforated & Carry the use of an Embossing work a Transmitter in a local circuit & record from the paper & send the same over the wire received on a 2nd Embossing Trans & then take this to a translating or Repeat in the same machine and convert it to a print & print chemically automatically

June 10, 1877
Edison

Disclosure

Charles Batchelor
James Adams

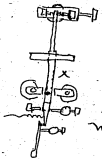



Quad + Sextuplex
June 10 1877
T A Edison
James Adams
Extra
Extra
Extra
E

Quad & Sext Capstan

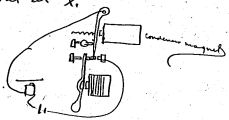
June 10 1877
T.A.Edison

James Adams



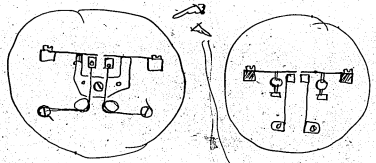
put this in

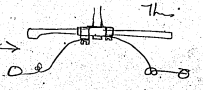
mention that station inductor magnet may be put at X.



Mention Condensers of thick dry paper only insulation so as to give low rate of expense

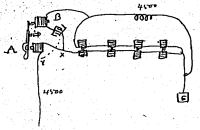
Show this in galvan;





Dextuplex =

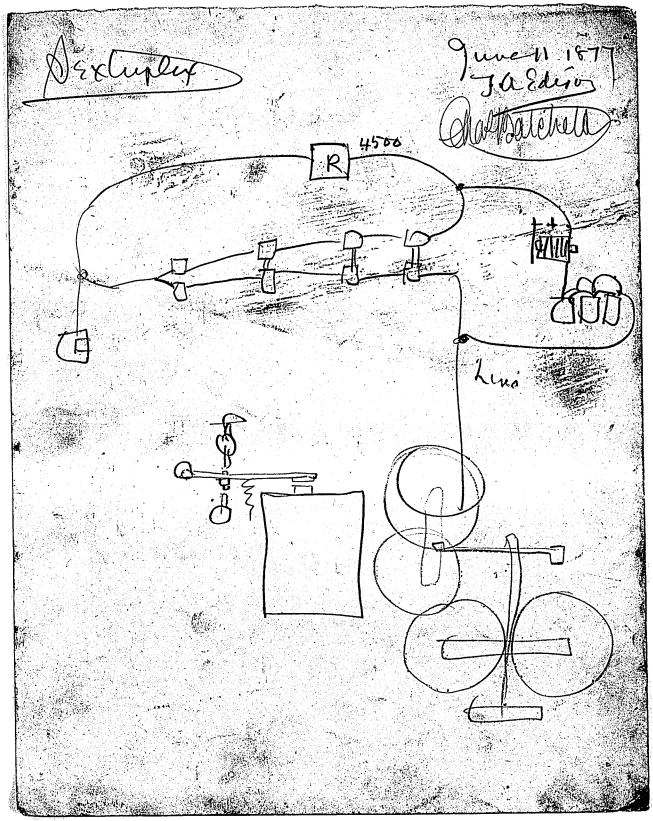
June 11 1877
T A Edison



With the 4 mf condensers the effect on A is to cause writing to come heavier by reason of its slight magnetism thrown on B by the Condenser current on opening & quickening it on closing & further with end of Condenser at Y. instead of X the writing is lighter, therefore the Armature cannot be attracted solely by the whip & giving motion in B. probably the discharge or effect of the Condenser on the magnet would be to make the living and the wound Explain it together with the whip of magnetism, the amount of Condenser charge & discharge with when operating by reversal of Current is exceedingly small in Comparison with that due to reversal perhaps 1/40 to 1/50 the part on string: even with No 2 of 150 coils the current barely moves the armature, I find that with the 50 coil No 1 the effect of permanent magnetism in the relay has very bad effect and with the top Magnet arrangement of Form the writing is rendered lighter when reversals are sent But you Can get writing good at 40 or 50, with the front point even when rapidly reversed. Tried this the other night & it appeared to work when I had Condenser shunting the Current by a shunt around a 400 ohm short coil relay but with the above arranged the Relay C being in the line & D in the Condenser ckt the reversal showed.

Dexcupley

June 11 1877
7A Edison



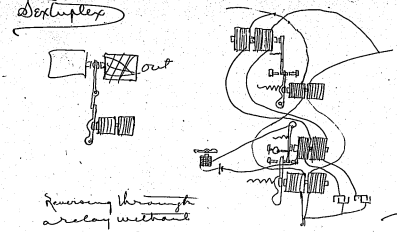
Duplex

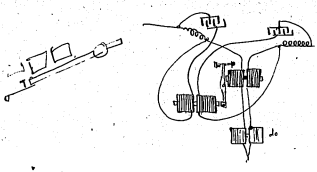
June 11 '77

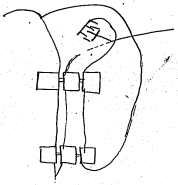
3

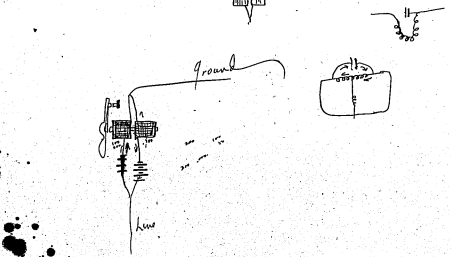
out

Running through
relay without
opening







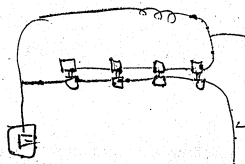


Sestuplet =

June 11 1877

Experiment

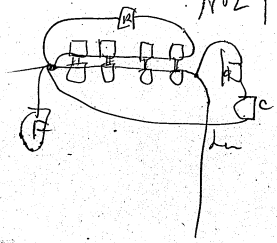
No 1



With 7 Mf. of do not get any better Kick on X than with 1 3/4 Mf or 72 Sheets Connected thus

Line

No 2

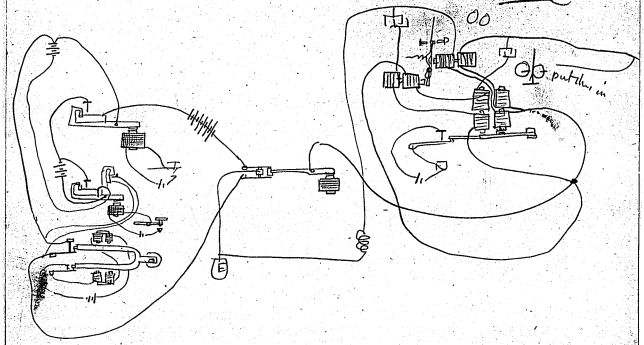


Besides pulling the Condrs as in No 1 it makes a bigger no magnetism line than in No 2. I think the Cond on Boom is not good.

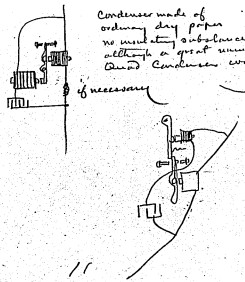
Acoustic Duplex

June 12 1877

T. A. Edison

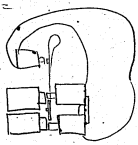


This with relay that I sent open on a reversal


Condenser made of ordinary clay paper no insulator substance put in it although a great number of ordinary Quad Condensers would do
if necessary

11

Duplex =

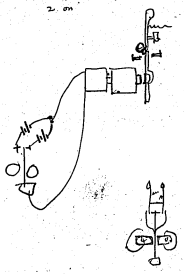


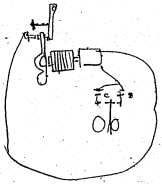
June 12 1877
J. A. Edison

30, 60, 100.

100.

2 off 75
2 on





50, 100
100
250

work No 1 with 30 cells, No 2 with 60
and open 1 when two is closed with 75 extra
or 50 No 1 100 No 2 open 1 with 2 closed by 100 Extra

50, closed, 1 125.
75 " 2 "

Dexterplex

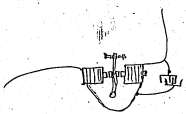
June 13 1878

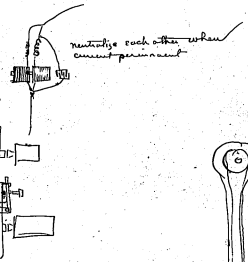
James Adams

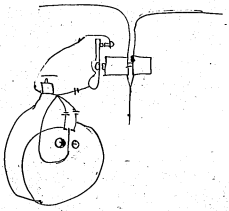
If methol doubling up 4 condition etc. Contaminin it doesn't have 1/3 effect of quantity Ilgls. thought it would give a quicker dump short + big end of first but alas!

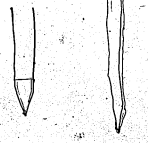
Sextuplex

June 13 1877
J A Edison
James Adams





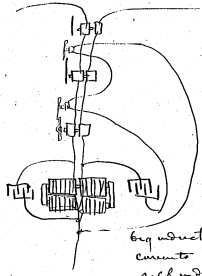




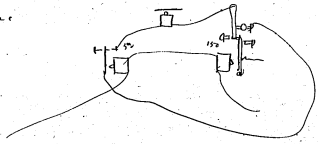
Duplex

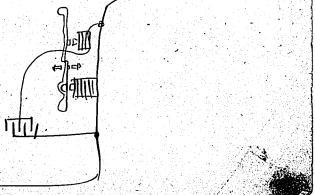
June 13 1877

James Adams



by induction magnet diverts
current into Condenser by its
self induction and Magneto
excites in ch arriving polarities





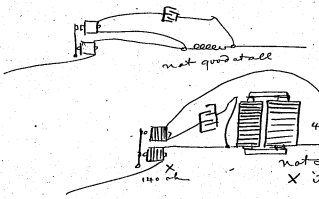
Dextuplex

June 18 1877

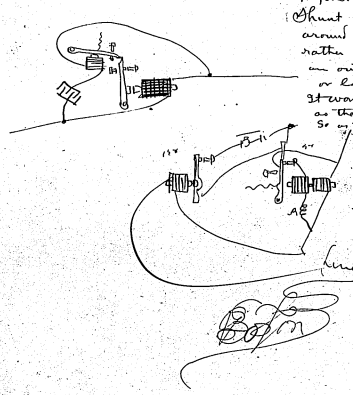
Edison

Chappell Stein

James Adams



I find that it is better to shunt the Condenser and magnet around the coil magnet rather than around or around an outside separate resistance or low magnet a strong [illegible] perfectly as long as the regular magnet is adjusted so as to give only a moderate back or resistance spark if magnet coil is cut out + heavy copper put on the armature by Gravity, full power of spring is retained by Condenser coil [illegible] to the [illegible] [illegible] neutralize 100, 52



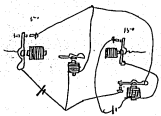
Line

Boston

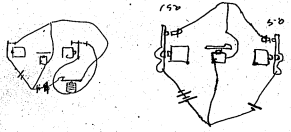
Duplex

June 14 1877

T. A. Edison



give 150 more the advantage in strength in Sounder magnet so a little excess of his current will neutralize Self magnetism of S. So altho' this may not be essential,



This works well ~~still~~ tho' ---- buzz is in this. but this time to on opening before two on closing

The trouble is Caused by the 50 relay having a light adjustment; ~~the~~ addition of the 150 causes a permanent set on the Cores so that when all Current is taken off ~~that~~ the lever of 50 dont fly away as soon as that of the 150, if 150 may is adjusted so it will release at 9 or of the same Current as that of 50 then its Cores are further away + act quicker = 9 sec the Effect by the local spark on 50 ~~to~~ point the ~~lever~~ lever ought to leave at once but the + no spark appear but as a spark does appear ~~when~~ at on 50 point 9 after that the lever is slow + should be ~~short~~ shortened

Dr Taylor.

June 24 1917

I am testing for bugs with Chemical weighing machine

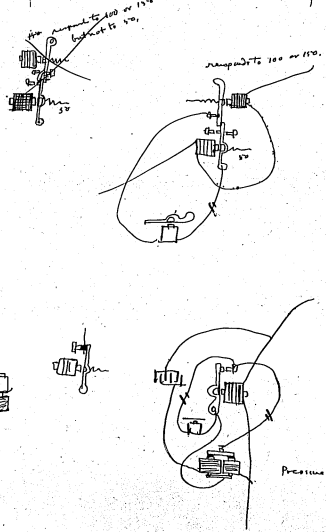
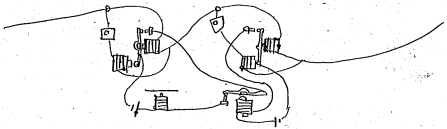


Exhibit A

June 14, 1877.

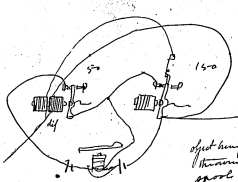


Duplex

June 17 1877

Edison

Chas. Batchelor



Object being to get main office set by transmitting in an extra opposite wound spool to centre of the 150 ohm battery the 150 ohm battery should leave 50 ohms when all batteries are open. The 50 relay will open when the 150 is only = 50 probably a little more in all cases, call magnitudes in all cases,

Chas. Batchelor

Batchelor

Chas Batchelor

Chas Batchelor

Chas Batchelor

Chas Batchelor

Chas

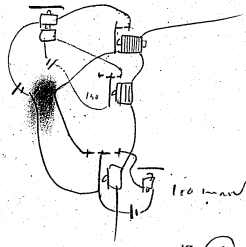
Batchelor

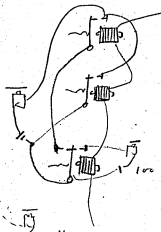
Acetuplex + Quad

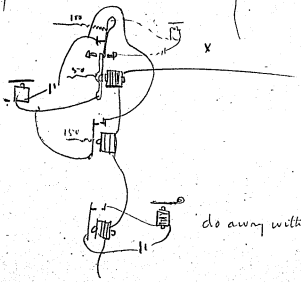
June 21 1877

Jackson

Charlie





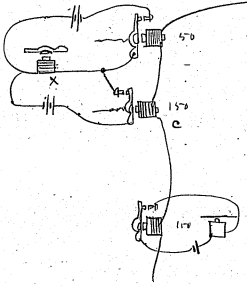


Duplex + Quad

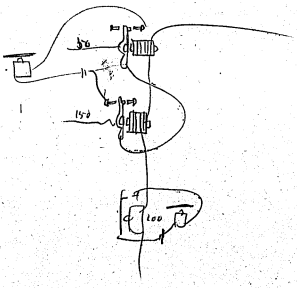
June 21 1874

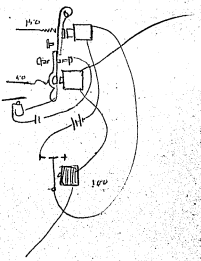
T A Edison

Automatic



50. on perm X open to close X take off all battery or when 100 ohm on a C attracted put on 50 cells to close then close at the transmitter Ewd =





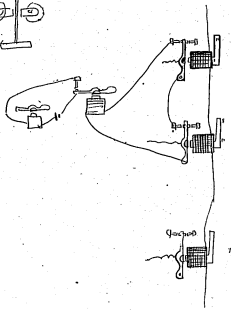
Dextuplex Quad Etc

June 21 1877

J.A. Adams

Inventor

James Adams



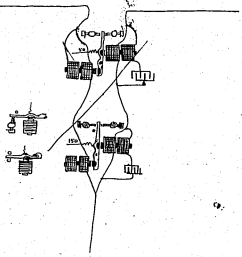
V.B

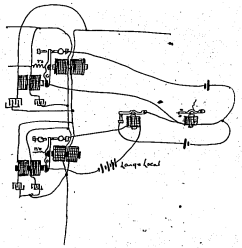
Boston Boston

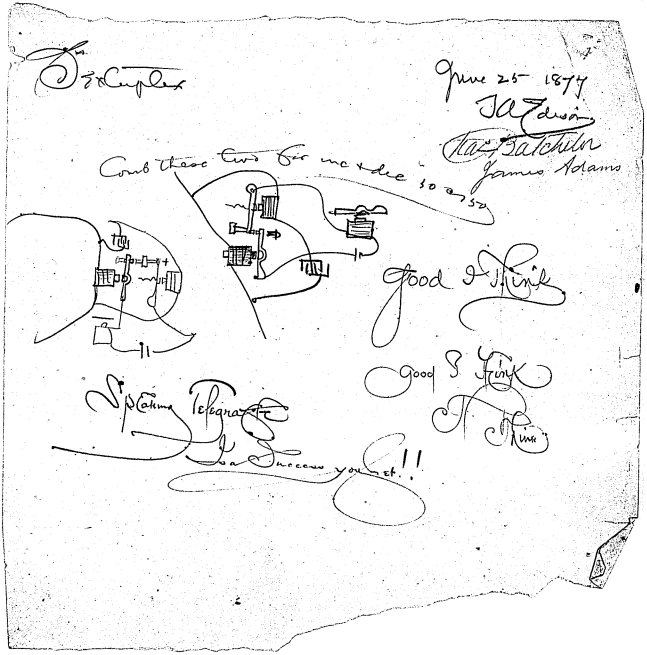
Sidney

June 22 1877

Mr Batchelor
James Adams






June 26 1874
T A Edison
Thos Watson
James Adams
Could these two for me & due to a star
Good Night
Good Night
Speaking Telegraph
Success you get!!

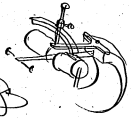
Quadruplex & Sextuplex.

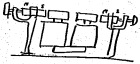
July 5 1877.

James Adams

C

Permanent Magnet
Corrector on Quad
Enlarged Plates



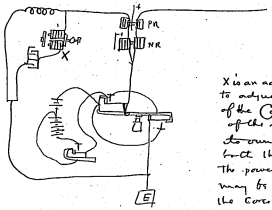


Quad + Description

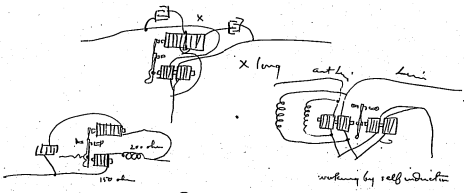
July 7 1877

J. A. Edison

Chas. Batchelor



X is an adjustable magnet to adjust the charge + discharge of the Condenser to meet that of the line which is done by its own self induction delaying both the charge + the discharge. The power of the self induction may be regulated by adjusting the core to or from the next armature.



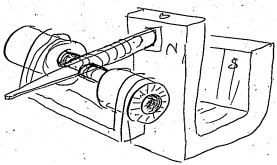
a relay you can reverse through without opening =

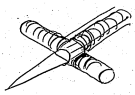
To get rid of the permanent magnetism or use in a magnet expressly a polar relay such as Quad 9 per space to use from one of layers of wire or wires =

Amalt Tel Co[illegible]

July 7 1877
74 Gower

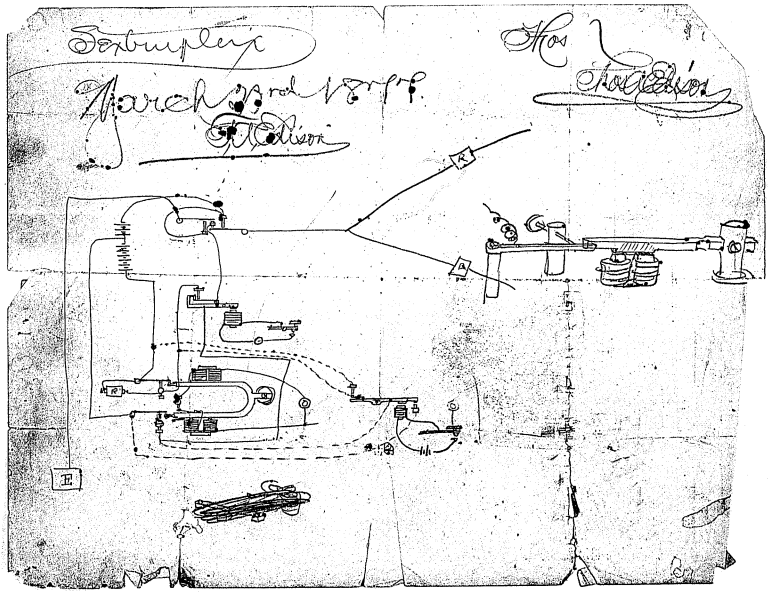
Chas Ratchelor





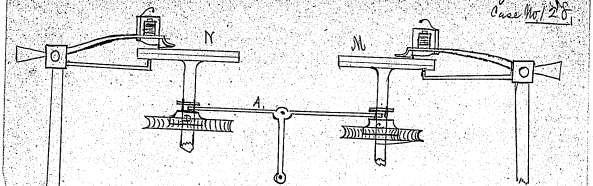
Hollow spools to suck in light extremities of the polarized tongue, passage of the Current Cause at least any permanent magnetism in the wire below or that is no use to magnetism and if the tongue's magnetism is increased or decreased it would make no difference as there is nothing to attract it or it to be attracted by

Plumbago 1 inch wide 1/8 in thick
Weight 16 Grams Run No 1 Road, over 10.000 ohms
" 66 " " 700 "
1/2 lb " 3,00 "
1 lb " 60 "


Sextuplex
Thos A. Edison
March 3rd 1877
Thos A. Edison
A
A
B
B
B

[March 1877]

Fig 5.
Case No. 128.



[March 1877]

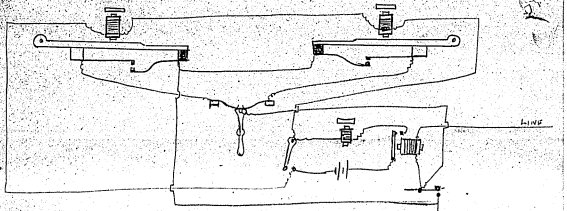
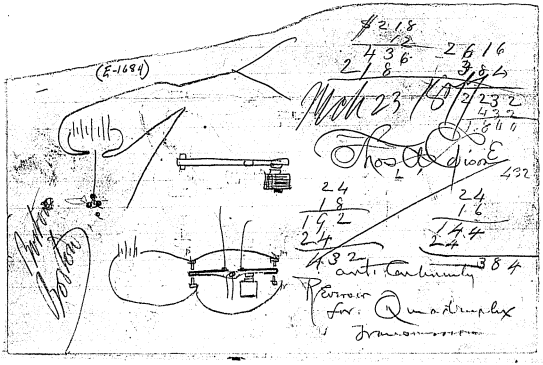
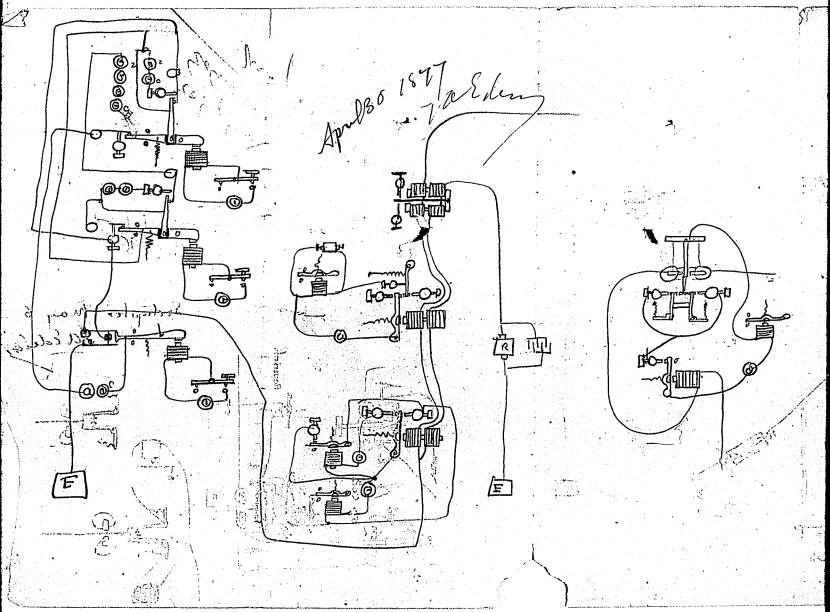


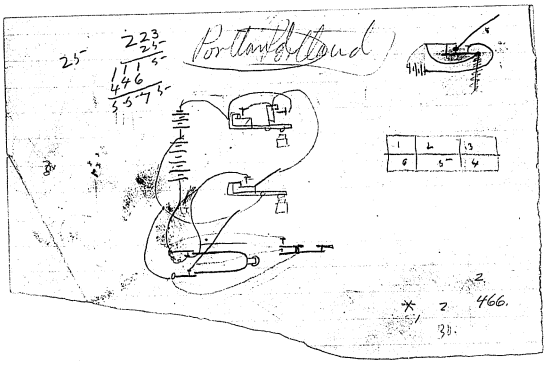
Fig 4 Case No. 128.

(E-1684)

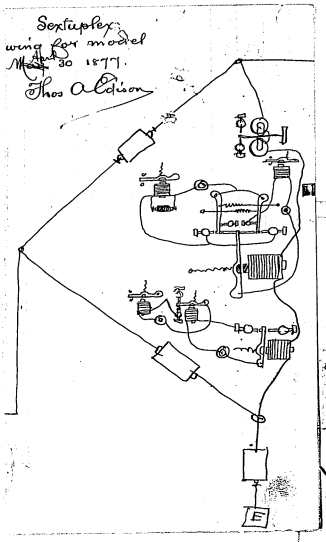


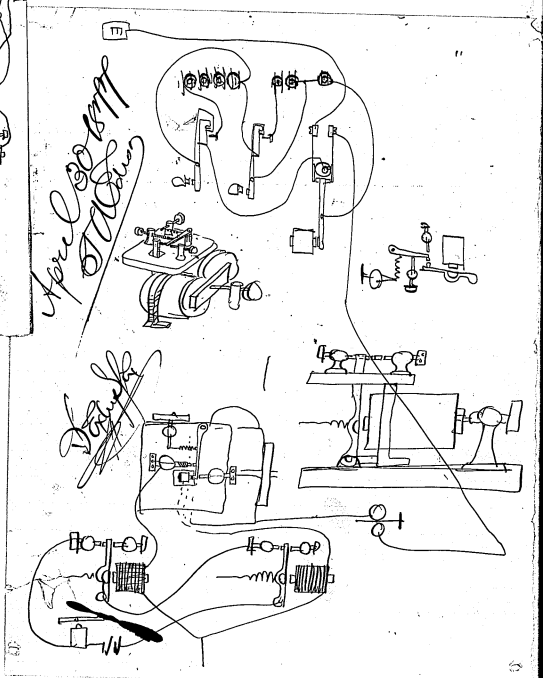
218
12
436
218
2616
3924
2328
4321
1511
Thos A. Edison
432
24
18
192
24
432
24
16
144
24
384
Receiver
for: Quadruplex


April 30 1877
J. T. Sidney
E
E

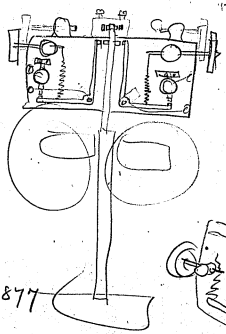

Portland Outbound
25
223
25
5
111
446
5 5 7 5
1
2
3
4
5
6
1
2
3
4
5
6
2
466.
30.

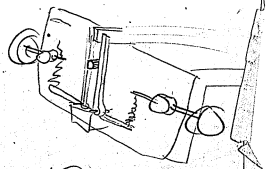
Sextuplex
wiring for model
April 30 1877.
Thos A Edison





#10,



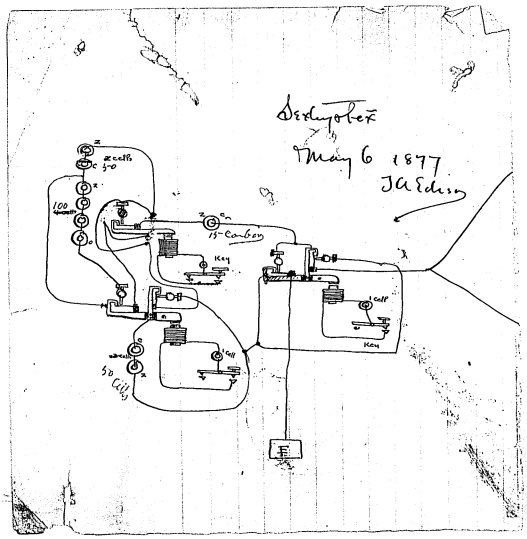


May 3rd 1877

Sixtuplex

T A Edison

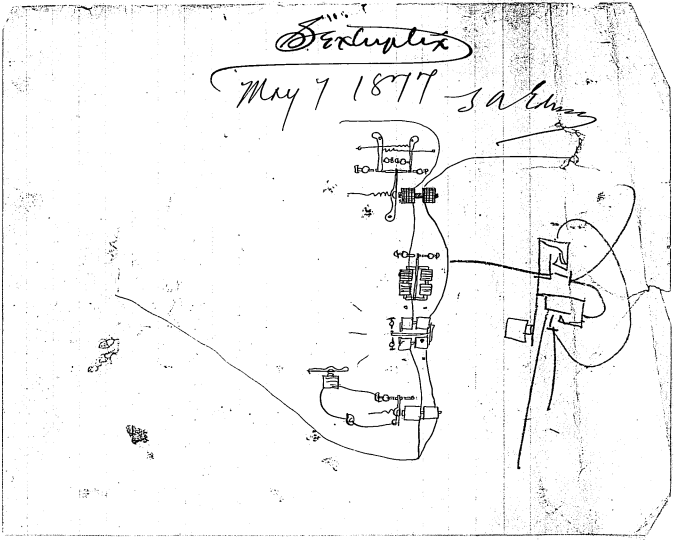
No. 24 Delvd. May 7th 1877

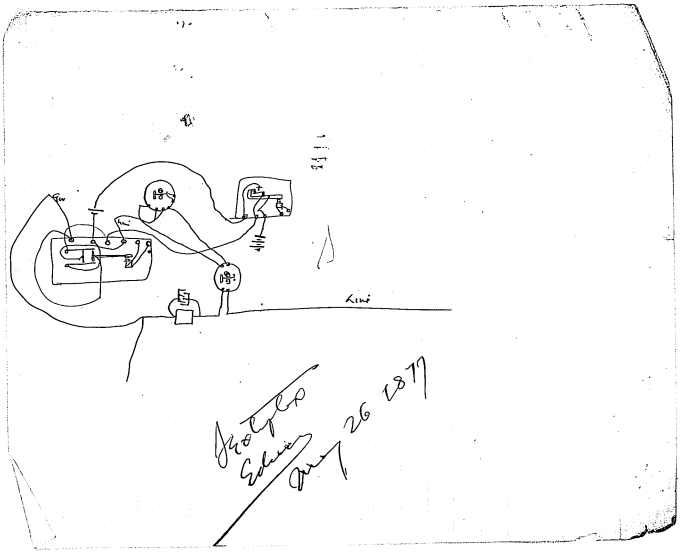

Dictyograph
May 6 1877
T A Edison
Key
Key
Key
Bell
Bell
Bell
SD Cell
E

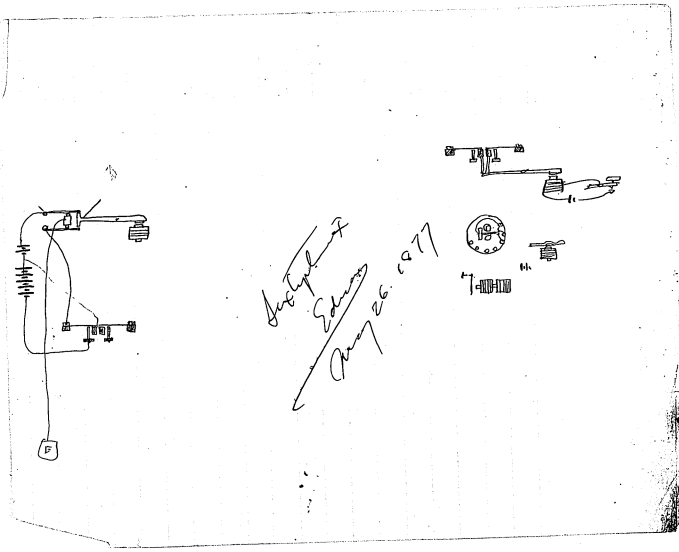
Sept. 6, 1877

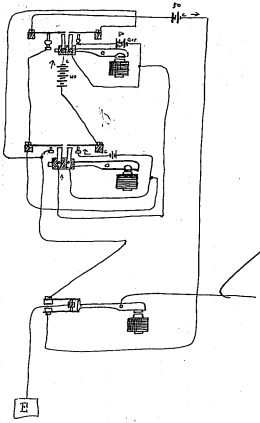
Exemplar

May 7 1877 Salmon





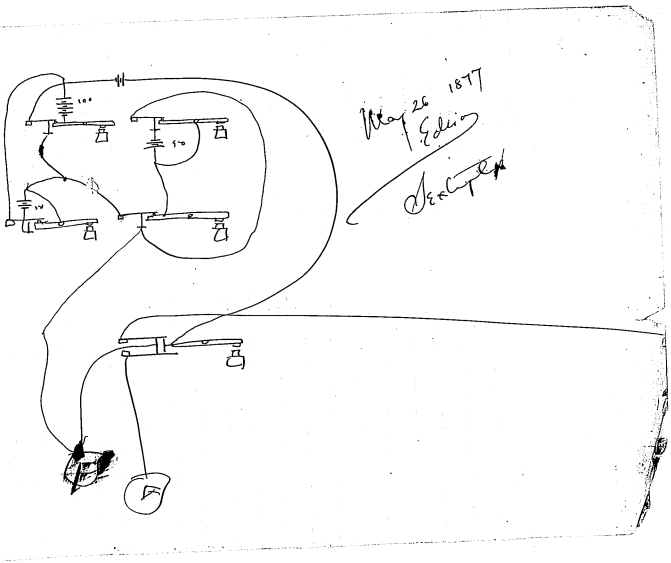

F

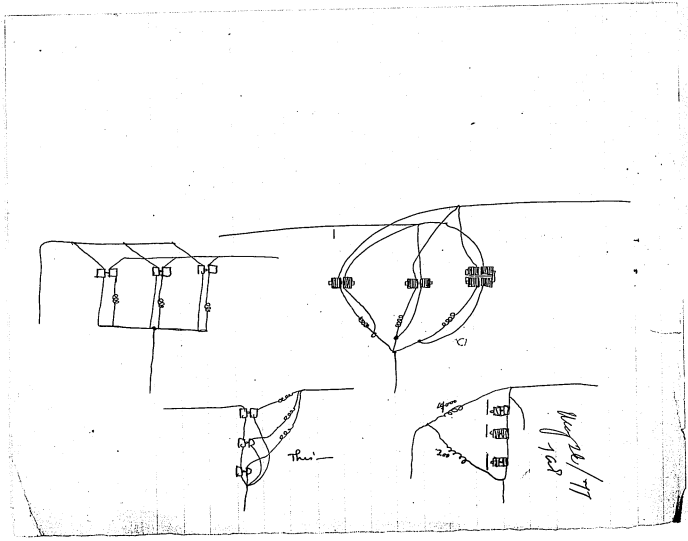


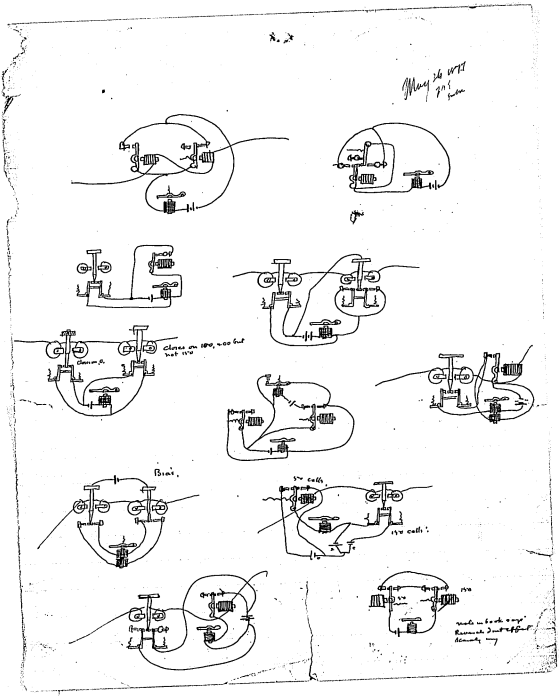
Sketch

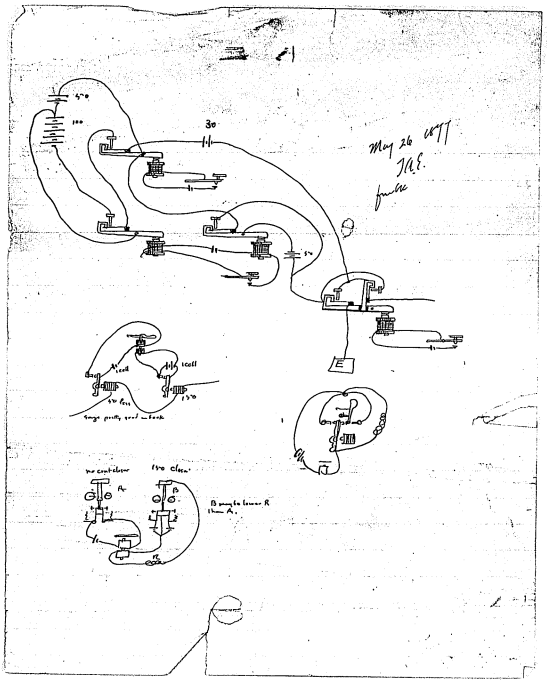
May 26 1877

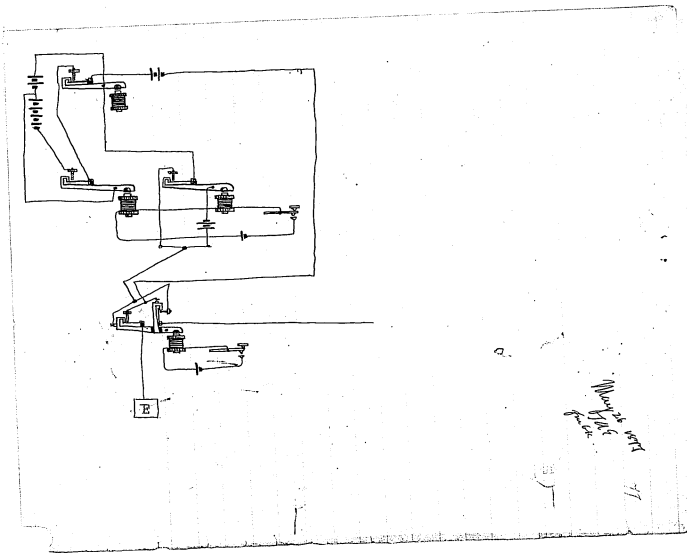
Edison

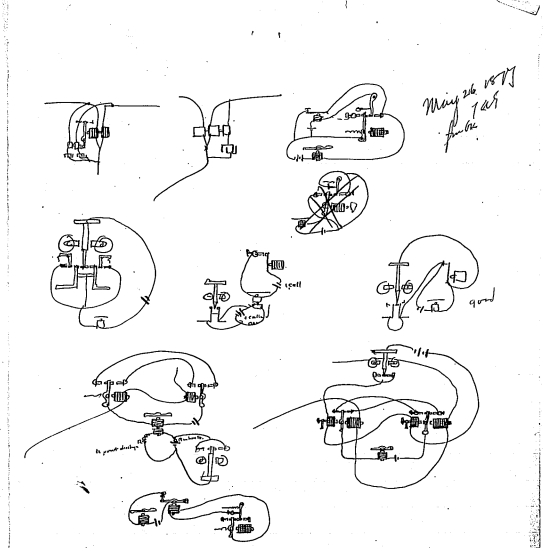

May 26 1877
Edison

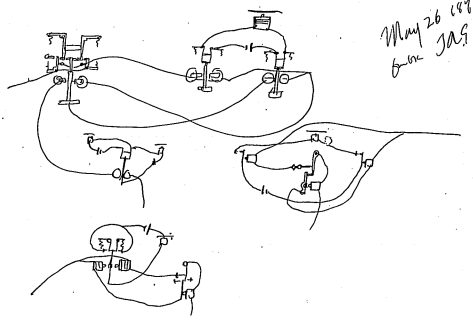



Bias.
1½ cells.
1½ cells.


4·0
100
30
May 26 1877
M.E.
for Ac
9
E
Acoil
Bcoil
to Ex
1330
to controller
to Clock
R
B
Brush to lower R
from A.


E



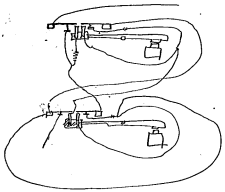

May 26 1987
Eric JAS

Way Station Duplex

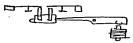
May 31 1877

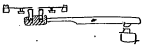
J A Brown

Thos Batchelor



Bullard

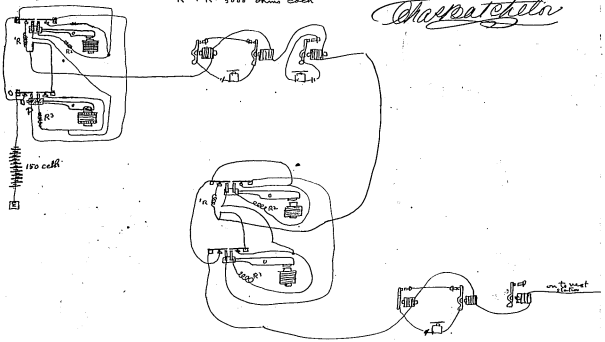




Way Station Duplex

May 31 1877
D A Gibson
Chesapeake

R¹ 10,000 ohms
R² & R³ 5000 ohms each

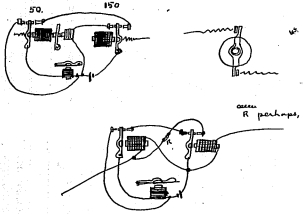


6400
3200
1600
800
400
200
12 600

1600
6400
1600
800
400
200
12800

W.U. Bldg June 6 1877 Sextuplex
Tel Edison

No 1



with No 3 brass open and No 2 open I get the 50 cells of main bat with No 2 closed 3 open I get whole battery but with No 3 closed & No 2 open I get nothing I just done that now want trace it

C

No 3 Closed & No 2 open

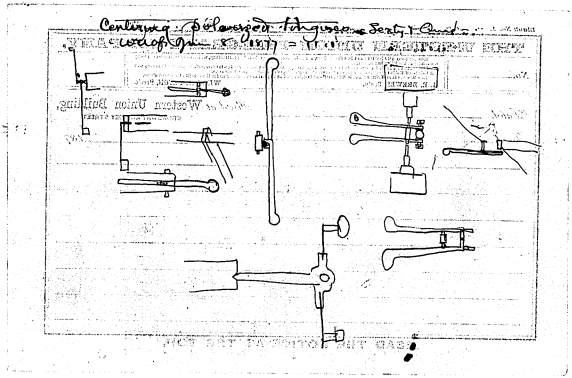
No 3 wire from the switch goes to the first thumbscrew on No 3 pole & your other wire from switch No 6 goes to 1st point in No 3 Commutator then to the pole & back via wires No. 4. and .5.

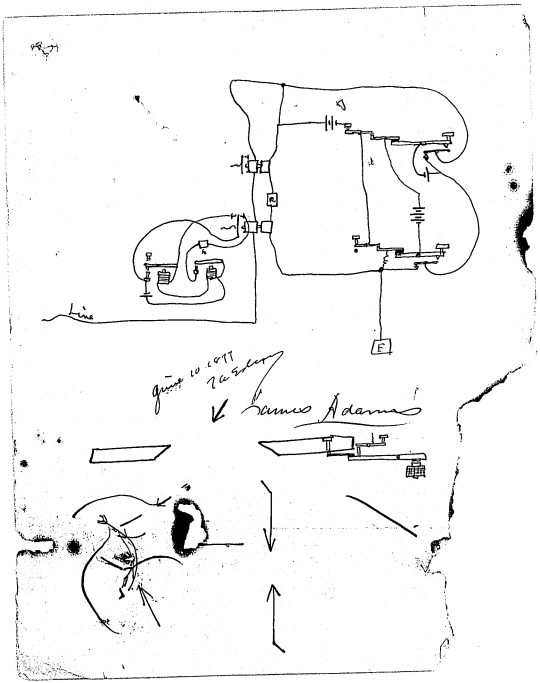
3 closed & 2 open
Nix = Both Closed
seem get whole Ball
but with 2 closed
& 3 open get
bigger Ballay.

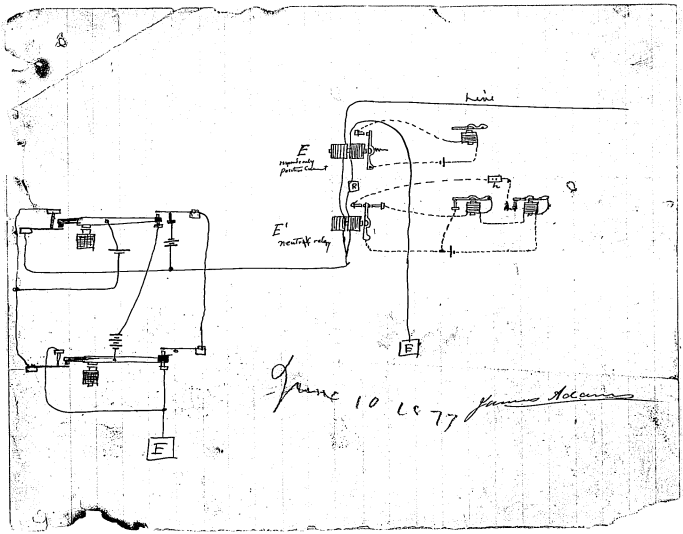
Its either on the inside
of No 2 Jaw either
or on the outside of
No 3 Cams

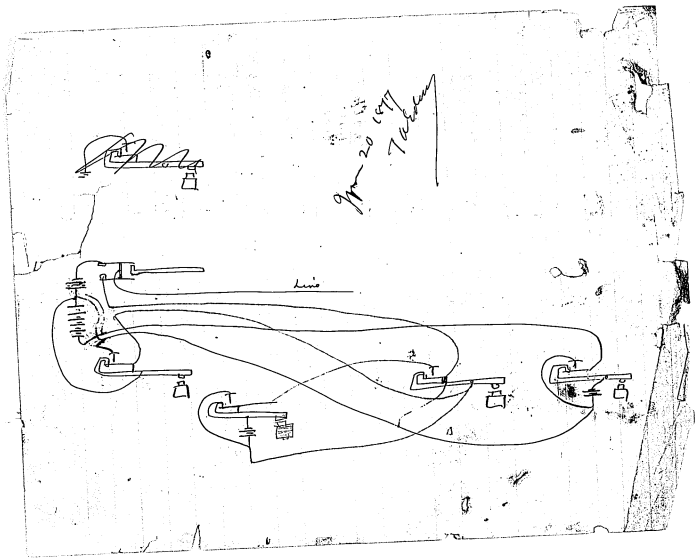
Either the wires in the
front of 3 are reversed
in their binding posts
or reversed in the inside
of No 2. or the Ballay
on No 2 is reversed.

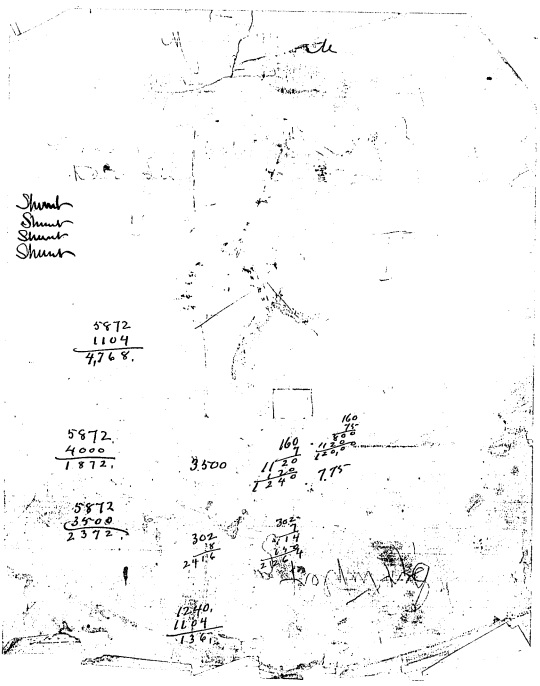
Suppose you reverse
your Ballay on No
2

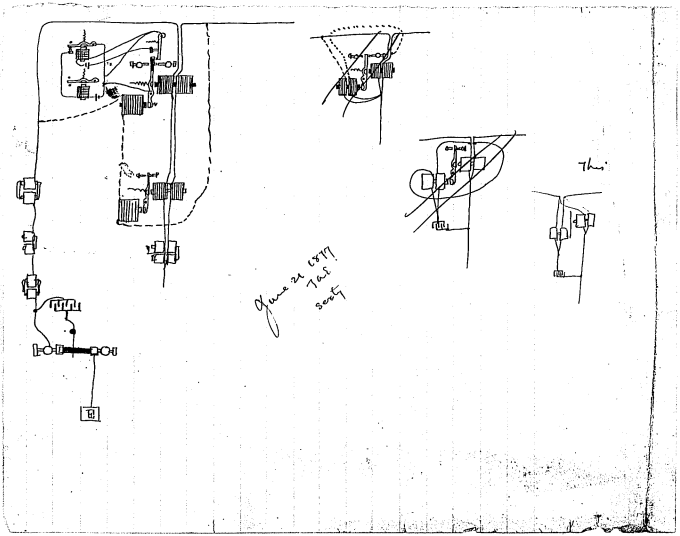



Line
E
James Adams


E
E'
E
E



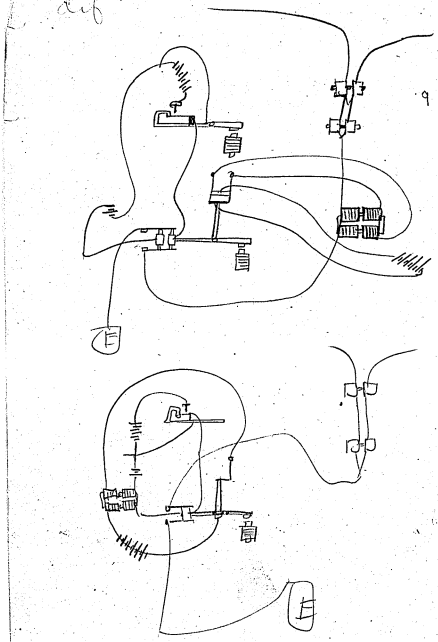

5872
1104
4,768.
5872
4000
1872.
3500
160
5872
3500
2372
302
2716
1240.
1184
136


June 21 1977
Thur
sent

Quad

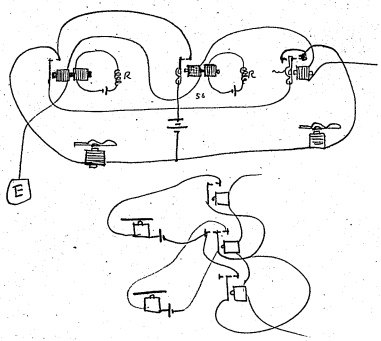
June 21 1877

Edison

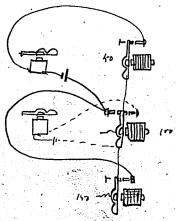


I think reversing the Current through the coil may will increase the Compn between the old way of straight Current

June 21 (87)
J.H.S.



attack

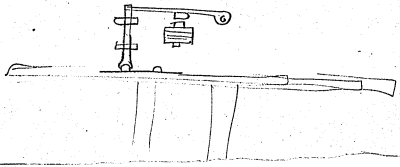


Display

Front work

June 21. 1877

How would it do to employ paper covered with plaster paris for the manufacturing Embossers if you want to raise in place of indents you could raise a boss spiral & then shave them



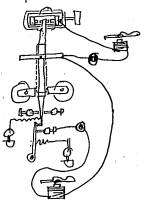
June 22 1877

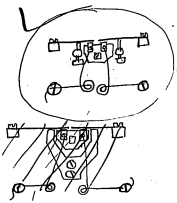
Front points on the Double relays

T. C.

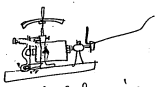
Not with the model I have Serrell drawn them

Say that a resistance can be inserted at a or a'.

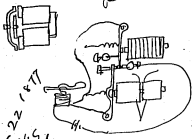




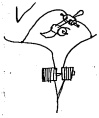
Claim a condenser made of ~~alternate~~ insulated with dry paper or dry paper previously soaked in chemical solution which give great polarization

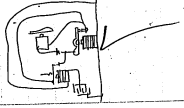


for balancing permanent magnetism

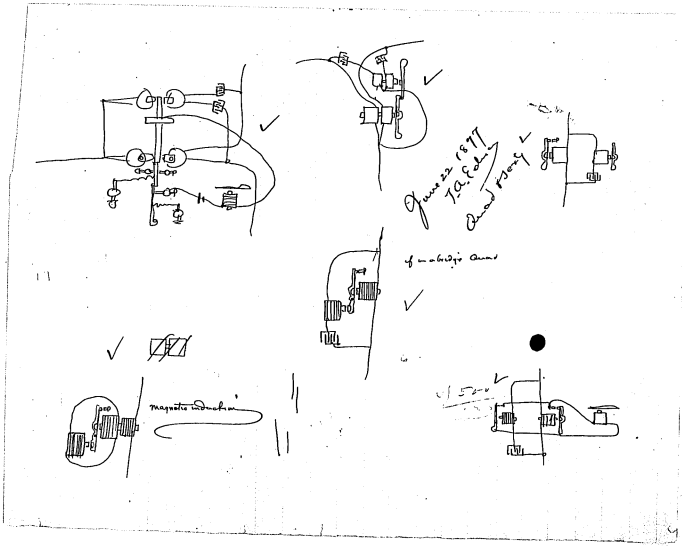


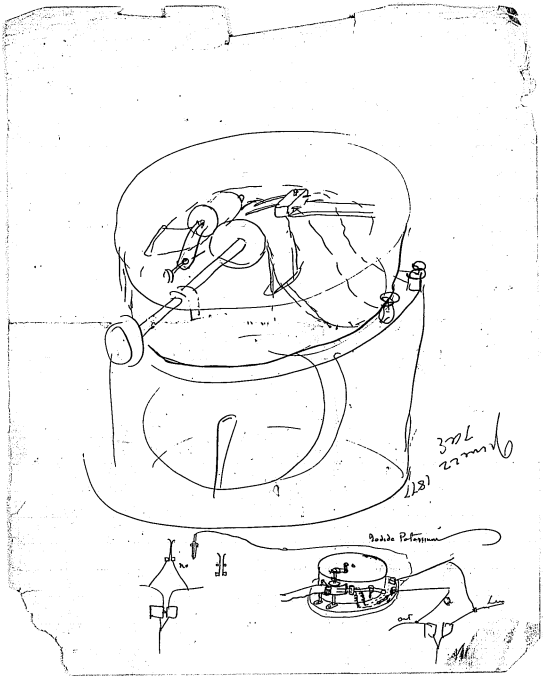
Mention that we have it of putting 1000 to 1500 ohms resistance in Condenser magnet





Jan 22 1877


June 22 1877
J.A. Fabis
Quad Front
Magneto Induction

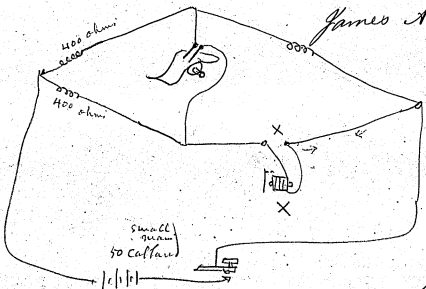

Bande Patagraue

Induction of Magnets June 25th 1877

Found Paper.

Chas Batchelor

James Adams

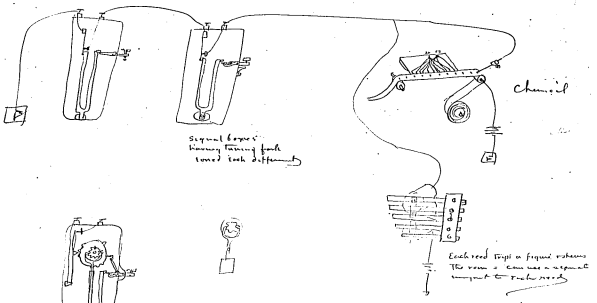


We made a Wheatstone bridge after this manner 400 ohms on each side of one end of Bridge and at X the magnet to be tested with its correspondent resistance in other side. We used 50 cells Calland & put Automatic Instrument with double Pen in bridge wire — With a 150 ohm W.U. Relay at X and the cores touching the armature we got this:—

Aerial Annunciator
& Electrical Telegraph

June 27 1877
J. A. Edison

James Adams

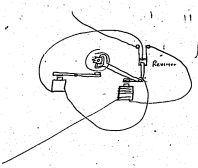


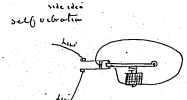
Hard Rubber of Sent gets coated on one
side & heat on the other; insulating
gum + Comm Glass 286 Gutta

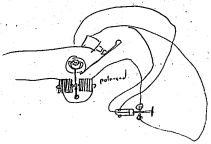
Gold & Stock Printing Telegraph

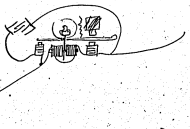
June 24 1877.
T. A. Edison

James Adams



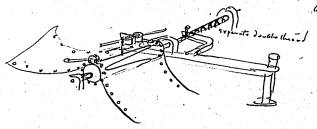




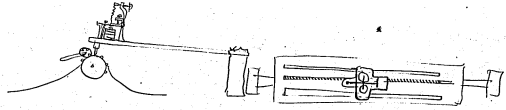


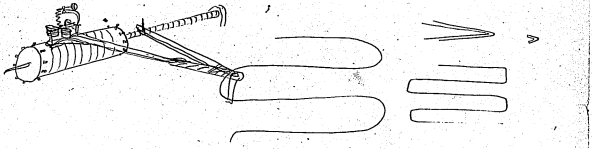
Translating Cylinder

June 27. 1877
J. A. Edgerton
Chas Batchelor
James Adams



on the Continuous roll be bored & prepared for obtaining accurate regulation to previously perforate holes either on both edges or on both edges with the Centre or on the Centre only, and pins to pass through the perforations & ensure the feed & regulation





Pmr 6

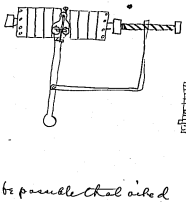
Telegraph Reporter

Morning
Edition

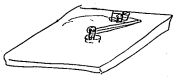
Monday
12

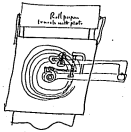
Translating Embosser

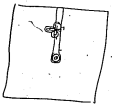
June 27 1877
Thos A Edison
Chas Batchelor
James Adams



It may be possible that oiled indenting paper is preferable, or that the paper should be parafined — shellacked, or dipped in plaster paris & water =





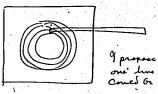


Traveling Embosser

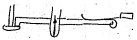
June 24 1877

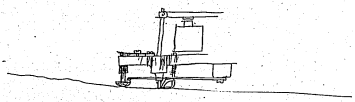
T A Edison

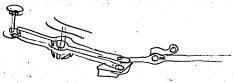
James Adams

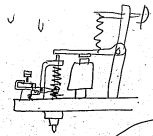


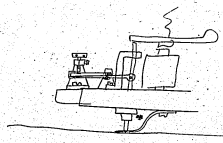
I propose in next humble to have the reversing pawls on two inside the embossing points, although I am afraid it will be a little awkward

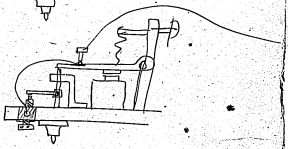


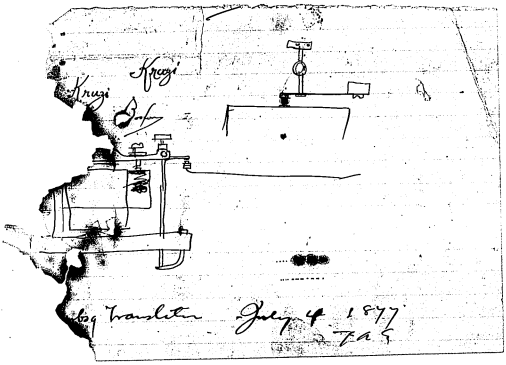








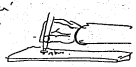



Kruzi
Kruzi
Log Translation July 4 1877

Autograph Telegraph July 5 1877.
Free Sml

James Adams.

For autographic Tel write your message by embossing on parafined paper which is moved by a spring Contact



2 Write with an Electric pen & then adopt the Wheatstone Automatic plan of grooved sender & vibrating the Contact point ~~upwards~~ against the paper by a tuning fork making perceptible undulations per second when no signals occur the needle ~~remains~~ passing through the paper hence no contact & when signals occur it passes through & thus allows the Spring to come in Contact with the platina point closing the circuit.

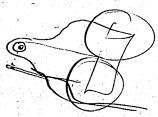
3rd Write with a blacking ink Ground into fine dust even with plumbago & pass under a press or Ostrich roller then will make it Conducting working use 2 pens to close circuit

Stop passing the mark the plumbago form a Circuit between the pens

Embossing Translator July 5 1877
To Edison

I propose to make the graver as James Adams
to put repeating point one or 2 lines behind indenter
& open Repeating points when necessary by Extra lever & cam.

Foil my Embossing paper



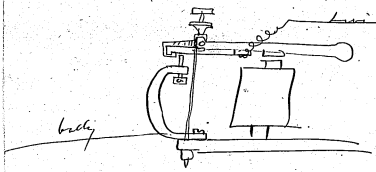
Machine oil & prepare any aleaqueous substance
will answer even the gum will work by stopping
the pores & all semi hard material when
the paper can be impregnated with wax
work = Instead of embossing in paper
I can use thin Copper or other metallic
foil, and I can arrange therein and
connection in such a manner
that the foil will close circuit & the
indentation will open by the point falling
into it and prevented from coming to the
Bottom by a hunting pin

Embossing Translator

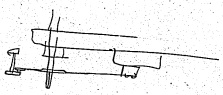
July 5 1877
To Mr Edison

James Adams

The embossing point itself may be made to repeat the retractile spring being dependent upon the lever by its own weight on the embossing point to lay on the paper when an indentation occurs it will down & the lever shutting a spring contact point closes the circuit



to obtain accurate repeating when it is undesirable to use the Embossing point a hole may be drilled in the Center & a needle passed down through it the needle connected to the spring & makes contact close



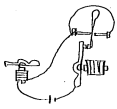
Translating Embossers

September 8, 1877
J.A. Edison

James Adams

We find that Lard oil is the best thing for soaking the paper to be indented = We have tried some preliminary experiments with the Continuous roll Embosser and it looks as if it would be a success

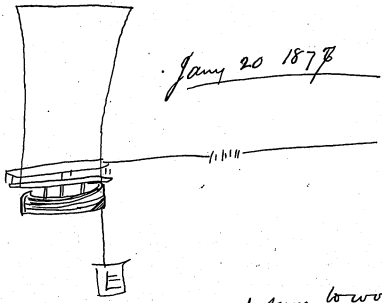
Desktop



September 8. 1879.
JCA Edison

James Adams

Speaking telegraph



Jany 20 1878

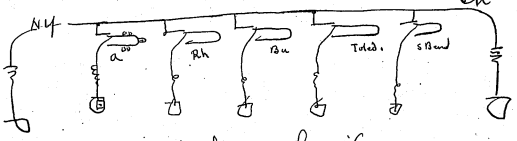
These Platina Points dont seem to work any
Better than one point yet it very good
on a western Union relay through my
teeth. but I think that I can get
it better if I had an adjustment to
it for Charley cant Hold it steadily
Enough

April 10 1897

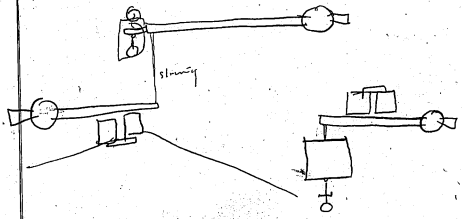
T Wrdw

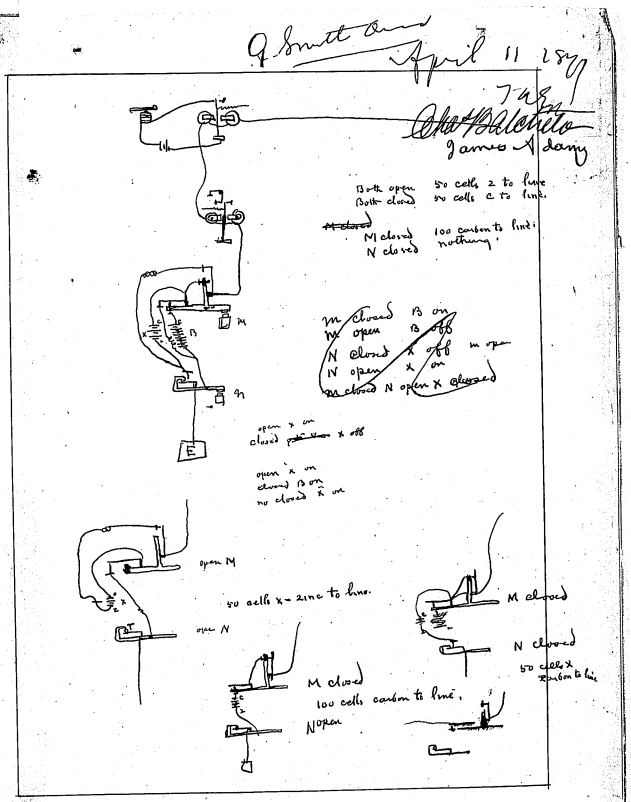
James & Carey

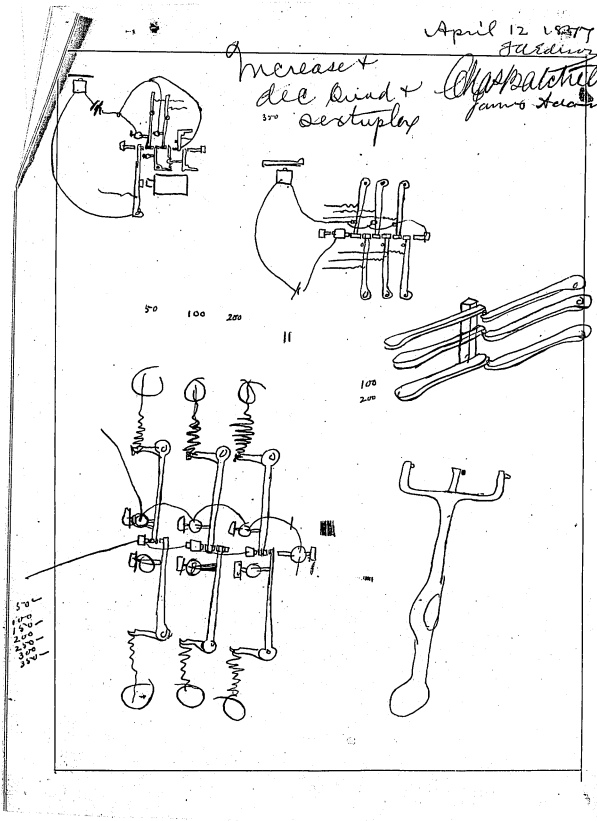
ch



discharge line by tuning forks worked by a hot cut




Q. Smith Amer
April 11 1887
Both open 50 cells Z to line
Both closed 50 cells C to line.
M closed 100 carbons to line
N closed nothing.
M
N
E
M closed B on
M open B off
N closed X off
N open X on
M closed N open X closed
open X on
closed B on
M closed X on
open M
50 cells X - zinc to line.
open N
M closed
N closed
50 cells X
carbon to line
M closed
100 cells carbon to line.
N open


April 12 1937
Increase +
dec Quad +
Osgoodschlatter
Destuples
50
100
200
100
200
50
100
150
200
250
300
350

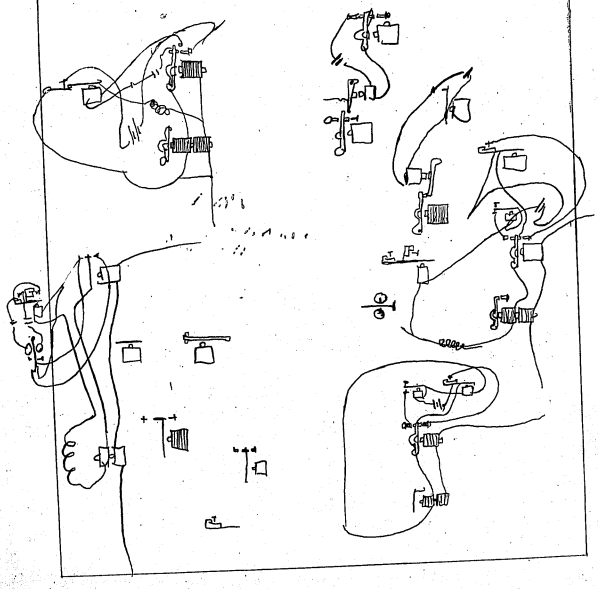
Daylight

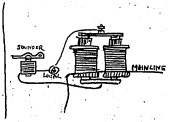
April 12 1878

T A Edison

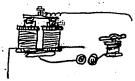
I think rouge on a small platina diaphram would be best thing for Ear Graph - with Acoustic

James Adams



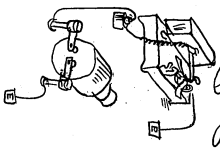


Pearson Relay
Aug 10 1897
J. A. Edson



Charles Patterson
James Adams

May 20 1927

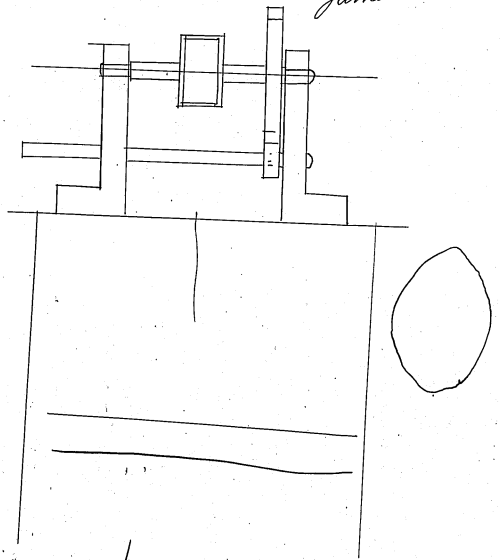


May 10 27

Surgery Telegraph

May 28 1877

Edison

Geo Gatchell

James Adams